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Considerable excitement has been caused in official pharmaceutical circles by the publication, about the middle of last month, of a bill to amend the Medical Act of 1858, introduced into the House of Commons by Dr. Lush, and drawn up by the solicitor of the Medical Defence Association. The main purpose of the bill was to inflict a penalty of 20*l.* on "any person who for the purpose of any Act of Parliament, or for the purpose of gain, shall take or use any medical or surgical name, title, or description, unless such person's qualification or qualifications entitle such person to take or use such name, title, or description, and such qualification or qualifications he also registered," also on "any person not already registered or not qualified at the time of the passing of this Act to be registered under the said recited Act, who shall make, fill up, or sign any medical certificate for the purpose of any Act of Parliament, or who shall practise medicine or surgery for gain, unless such person holds a duly registered qualification or qualifications in both medicine and surgery." The words we have italicised were evidently fatal to "counter practice" of any sort, and would, if they became law, shut up more than half the druggist shops in England. The bill was consequently opposed with much energy, both by the Trade Association and by the Pharmaceutical Council. The latter body had the advantage that one of their members, Mr. Atkins, was personally acquainted with Dr. Lush, and it came out at the council meeting, on June 6, that on May 19 Dr. Lush had assured Mr. Atkins that he had no intention to attack chemists at all, and that he would withdraw the objectionable clause from his bill. Mr. Atkins at once informed Mr. Sandford of this assurance, but it does not appear that the fact went further. At any rate the Executive Committee of the

Trade Association met in Birmingham on May 25, and organised a vigorous opposition to the bill, drawing up petitions, interesting members of Parliament, and communicating with pharmacists all over the country. All this time they were flogging a dead horse. We cannot help remarking that the Trade Association, after so many attempts to work in harmony with the Pharmaceutical Council, has reason to complain that such scant courtesy should have been shown in return. On June 1 Dr. Lush fulfilled his promise, and withdrew his bill for amendment. He has since reintroduced it, worded exactly as before, but with the words italicised above omitted.

A deputation, consisting of one eminent and several other medical men, waited on the Home Secretary on the 4th inst., to get "the support of the Government to a short bill for remedying the defects of the Medical Act, 1858." What was asked for was that an enactment should be passed to carry out the spirit of the Medical Act in effectively dealing with the "quacks" now practising in various parts of the country. By quacks we suppose they meant all they chose to call such. However, they did not get much encouragement. The memorial and wishes are to be "forwarded to the Duke of Richmond."

The annual meeting of the Pharmaceutical Society on May 16 was rather lively, and the recent council report was somewhat severely criticised for its meagreness and lifelessness. The prosecution of co-operative stores was strongly urged by several speakers.

Mr. Churchill, of Birmingham, one of the active members of the Executive Committee of the Trade Association, and Mr. Gostling, of Diss, who professes himself a representative of the country chemists, are the new members of the Pharmaceutical Council.

The Benevolent Fund Dinner, held on May 15, was attended by about 240 persons. The subscriptions and donations announced reached over 1,400*l.* This was about 100*l.* less than was collected on a similar occasion ten years ago, when also the attendance was rather larger.

The long existing discord in the Chemical Society was brought to a point on May 31, when a pitched battle was fought between a few representatives of the exclusive set, mostly confined to the younger section of the society, on the one hand, and nearly the whole of the really influential members on the other. The youthful party have desired to exclude from the advantage of association with themselves in professional union all but the very select. The senior party, on the other hand, who were well represented by Professors Odling and Roscoe and Mr. De la Rue, who are entirely free from any desire to trade on the letters F.C.S., have much broader views. The discussion, which is specially reported for us, will be found of considerable interest.

The Irish Pharmaceutical Council has passed a resolution to write to the President of the British Pharmaceutical Conference expressing a hope that the said conference will come to Dublin in 1878, at the time of the visit of the British Association.

Sheffield again provides a pharmaceutical sensation. A chemist there seems to have sold some jalap containing a large admixture of nux vomica. The death of two valuable sporting dogs was occasioned thereby, and the chemist, besides being fined under the Sale of Food and Drugs Act, is sued for damages in a civil court. The case is somewhat mysterious though, as Mr. Jenkinson (the defendant) positively declares that he has sold jalap from the same bottle for months past, and there is no conceivable reason why he should mix nux vomica with it. The latter seems to have been mixed with it, and not merely added to it.

Whatever harm the Medical Defence Association wished to do to the chemists, it hardly desired to be the active agent in their death. But on May 22 their first victim was found dead on his

own threshold. A Mr. John Middleton, dispensing chemist at Newington, had read accounts of the various prosecutions of chemists, and these had so preyed on his mind (already enfeebled and depressed) that he committed suicide by taking prussic acid. The jury returned a verdict that "death was caused by the deceased taking prussic acid while in an unsound state of mind."

The chemists' assistants are to be allowed the use of the lecture theatre at Bloomsbury Square after all. A meeting will be held on June 28, for the purpose of organising an association. Mr. Postans, of Baker Street, will occupy the chair. The meeting is advertised in another part of this journal.

The new German Patent Laws, which will come into force on July 1, are a vast improvement on the confusion which now exists. To cover the whole of the population of the German Empire amounting to forty-three millions, no less than 21 distinct patents had to be taken out. Now a patent is procurable for 15 years covering the whole empire, at an expense of only 265*l.*, and this is payable by yearly instalments.

Mr. Robert Ellis, of Sloane Street, writing to the *Times* of the 14th inst., advocates the use of glycerine for preserving lime and lemon juice from change and freezing. The juice is to be heated to coagulate albuminous matters, and then sweetened with pure glycerine. This admixture will not only retard fungoid growths, but prevent the juice freezing even during Arctic winters.

The homoeopathic doctors have been allowed the opportunity during the past fortnight of displaying their wares in the *Times*. Some few of them, represented by Dr. Wyld, are pining for admission into the professional haunts where other medicals must do a regular, and the *Times* at least as far as to arrange terms. But more practical gentlemen came forward, Dr. A. C. Pope and Dr. Dyce Brown. These gentlemen have no notion of dropping the rôle of professional martyrs, and they are no doubt very prudent. It would be a theoretical question to throw away the heroic feeling associated with the heroic taking of decillionth dilutions. "No," says Dr. Dyce Brown, M.A., M.D., and six lines more of titular distinction, "we have maintained our position and our stand for what we believe to be the greatest truth ever discovered in therapeutics so long, that we can afford quietly to wait for—what is only a question of time—the full recognition of the great principle of which we are proud to be the custodians." Need we add that Dr. Dyce Brown is a recent convert? The homoeopathic camp is, therefore, now clean divided, and the gulf between them and the allopaths is vastly widened. Dr. B. W. Richardson is the peace-maker who has brought about this latest squabble.

Among other legal items which have come forward this month it may be mentioned that the Inland Revenue prosecution of Mr. Lamplugh for not stamping his *Saline* has been again argued before the Court of Exchequer, and the decision is expected daily; and Dr. Paul having a claim against another analytical chemist has been fined 100*l.* for using legal means to recover the same.

Three makers of aerated waters have fixed on the device of a cock in a circle, as the most appropriate trade mark they can think of for their products. The Master of the Rolls remarked on the lack of ingenuity displayed, but he is willing to allow three similar trade marks for each class of goods if the competitors do not themselves object.

The Manchester School of Pharmacy publishes a report showing that during the past session altogether 84 entries in the several classes had been made, or 32 more than during the previous year. So that evidently Manchester has vigour enough to resist the seductive influence of skating rinks. The school is now a self-supporting institution. It has the advantage of able teachers in Mr. Siebold and Mr. Grindon.

Pharmacalia.

The festivities of pharmacy have ended: the Benevolent Fund dinner, the *conversazione*, and the annual meeting of 1877, are things numbered with the past.

At the first, Mr. John Williams, the president of the society, was in the chair quite the right man in the right place, and we rejoice that the honour was not delegated to some exotic notability, who, however distinguished in the general world, could not so fittingly have occupied the post, or have personally represented the great family for whom he had to plead.

The treasurer, Mr. Cornelius Hanbury, made an excellent speech: the same gentleman has been placed at the head of the poll on the council list by the votes of his constituents. He uttered a fervent wish that this Benevolent Society, whose interests they were met to support, might be an abundant success from year to year, and that the time would never come when those who were successful would be forgetful of those less fortunate.

Dr. de Vrij was also present, than whom no one has more advanced the cause of pharmacy, and whose labours in the path of original research have been as continuous as they have been remarkable. Our esteemed friend was of opinion that a great deal had yet to be accomplished before English pharmacy could be placed on the same footing as it held on the Continent. He deplored the want of a pharmaceutical staff, both in hospitals and in the army. Medicine and pharmacy should work together in the cause of humanity, each in its own domain, without interfering on the other.

We believe his wish will, at no distant date, be carried out, and that in the civil and military service pharmacy will have official recognition. As regards any other status we have grounds for thinking that the British pharmacist is on a par with his foreign neighbours. He may confidently enter upon the same class of work, and he has the advantage of connecting his abstract knowledge with direct practical results. In the higher branches of analytical investigation, the once deficient English chemist may compete with the *savans* of continental fame. Nevertheless Dr. de Vrij speaks with the experience of 30 years' acquaintance with our position, and he is entitled to all respect. Probably he alluded chiefly to our official status, and there his remarks cannot be called in question.

Brevity, which is the soul of wit, has of late characterised the proceedings of the annual general meeting of the society. The same would possibly have been said of the recent anniversary, for the council report was short, and the presidential address was briefer still. Members, however, took exception to this shortness, and also to the absence of certain topics from the report, and hence arose no small discussion. Burning questions (a new favourite pyrotechnic simile) had been eschewed, and, in fact, gunpowder in any shape. The *lac sulphuris* trial, the Nottingham case, and co-operative trading had equally been ignored.

It was urged by successive speakers that the matter of trade interests, as compared with other subjects, had been placed much in the background, while too exclusive attention had been bestowed on the Benevolent Fund and education.

Whether a retiring council was bound to express its views on the pharmacy of the future we cannot tell: in the meantime it is hard to see how it could report on matters with regard to which it had publicly done nothing. We take the whole discussion rather as an expression on the part of the members of the line of policy they would wish to be introduced than as strictures on the framing of an official document, and this is the legitimate use of an anniversary meeting.

Mr. Flux, in the course of the debate, gave excellent advice not to run the question of the druggists' right to give advice behind the counter on the fatal word *prescribing*.

We beg to add our most earnest exhortation in the same strain, and to second his proposal. The word "prescription" comes from *prescriptum*, a thing written by qualified authority—that we have no right to touch; *prescribere* is the verb, involving the same meaning—that we have no right to do. We are fully justified, and circumstances impose on us, the necessity of giving advice in simple cases; while universal custom and necessity defend what is called counter-practice.

The Trade Association has received public acknowledgment from the presidential chair: assurance has been given by Mr. Flux that it is his "thorough and honest conviction that if there were a well conducted, manly fight on that subject, no chemist and druggist who kept within his own doors had anything to fear." That we must not complicate the matter by allusion to the medical term *prescribing* the commentary of the *Medical Examiner* (June 7) will show. Judgment is there given against the druggist in no measured terms, the writer having naturally interpreted the word as used at the annual meeting in its recognised medical acceptation. Utterly we agree with our own legal adviser, that if pharmacists "took their stand on counter-practice as a necessity of the case for chemists and druggists, and for public convenience, he had no moral doubt whatever that the judges would go with them, as well as the Legislature."

Long after the "prescribing" paragraph was written we met with the report of the Chemists' and Druggists' Trade Association. The importance of the crisis must plead as an excuse for twice harping on one string.

The proceedings at the Freemason's Tavern were so consonant with common sense, and evinced so great moderation, that we should be sorry if the remarks above made should be taken as a sort of inferential adverse criticism.

Mr. Jones of Leamington, Mr. Vizer, of Brighton, Mr. Preston, Mr. Wade, and others, guarded the question of counter-practice in the most careful manner, though all used a term which has already given rise to misinterpretation in non-pharmaceutical journals.

Each and every speaker asserted the indisputable right of giving advice in simple cases, of expressing an opinion on remedies to be applied in trifling ailments, and of preparing and supplying medicine in such cases with that intent.

Were the contrary to become law, the pharmacist would sink down to the degradation of being surrounded by a collection of remedial agents, by the sale of which he gets his living, but with respect to the nature or use of which he would be compelled to assert his ignorance.

No anxiety need be felt as to the issue of the contest so long as the Trade Association refuses to be led away by declamation, and perseveres in its present manly and dignified assertion of the right and privilege of counter-practice.

We are keeping Mr. John Williams and his address waiting far too long, and we have only space to indicate the tenor of his remarks.

Our president cannot be accused of not practising himself the lessons he enjoins. Formerly one of the most industrious of assistants, he soon became known as one of the ablest of our manufacturing chemists—there being a certainty almost of obtaining any rare chemical at his establishment. His commercial success is before the public, and therefore may be alluded to without indelicacy.

It was, then, with peculiar force that he directed his remarks to the professional career of rising pharmacists.

He told them that the man who scrapes through his Minor, and is satisfied with that achievement, or the one even who rests content with the fact of gaining the higher qualification, should remember that these must be considered as first, but not

final, steps. The real career of the pharmacist commences so soon as he is actively engaged in business.

That very business of which many sorrowfully complain was only dull, irksome, and disagreeable when points of interest which perpetually occur are passed by without notice. So men are content simply to work, and working thus, literally labour. Better is it both for business and for intellectual pleasure that their studies should be continued, for all knowledge is of money value, and the public "will not fail to distinguish between the man possessed of scientific or professional knowledge and the mere tradesman."

Mr. Williams took a hopeful view of the state of feeling on this subject. Men of the present day were not content to be something between oilman, grocers, perfumers, quack doctors, and pharmacists. Yet, though great pharmaceutical activity existed in many parts of the country, there were ugly blanks remaining. He urged the universal establishment, where possible, of local associations, neither purely scientific nor strictly educational centres, nor organisations solely devoted to trade interests. He contemplated as his ideal the union of all three, much resembling on a minor scale the parent society itself. He was sanguine in the hope that the time would come when every large town would possess its own local society, affiliated with the one in Bloomsbury Square, "thus both giving and receiving support, and advancing the common cause; that the smaller towns and villages would be aiders and supporters to those centres; and that the organisation of the trade, both for professional and business purposes, would become complete."

Science has lost a great man by the death of Joseph Bienaimé Caventou. In 1820, together with Pelletier, he discovered quinine, one of the most valuable remedies that has been contributed to the repertory of pharmacy.

The bark from which the alkaloid is obtained had already become famous, whether under the name of Countess's Powder (the Lady Ana de Oserio, Countess of Chinchon) or as Jesuit's Bark, so called from its introduction at Rome by the ecclesiastics who belonged to the Society of Jesus.

The story of cinchona bark has been invested with many romantic incidents, most of which had more foundation in fact than similar legends. One thing is beyond a doubt, that the bark having basked in popular and courtly favour, and having been lauded in terms of extravagance, fell into general neglect, until its use was revived by Sir Robert Talbot, who is said to have sold his secret to Louis XIV. Manifestly it was a grand step to have isolated the active principle of cinchona, and imperishable honour must attach to the name of one who either himself discovered, or actively shared in the discovery of, quinine.

Two years previously Caventou had isolated veratria; subsequently strychnine, brucine, and caffeine were added to the list, and he demonstrated the nature of chlorophyll, the green colouring matter in plants. This last substance is undergoing further important investigation, the nature of which may be learnt from the June number of the *Microscopical Journal*, and its references to former work.

At the age of twenty-seven Caventou was elected one of the original members of the Academy of Medicine, of which he lived to be the dean. One would have thought that a man who had so largely widened the boundaries of research, and whose labours were so directly beneficial to the world, might have even been pardoned a slight exaggeration of his own merits. On the contrary, his self-confidence was in inverse proportion to his capabilities. In spite of the protestation of his associates, he resigned his Chair of Toxicology at the *École Supérieure de Pharmacie*, which he had filled so ably and so long, and acted upon the deliberate conviction that younger men were likely to

be better exponents of the revelations of modern science. The funeral service was performed at St. Roch. All the representatives both of the Academy of Medicine and of the School of Pharmacy were present, in order to pay their last homage of respect.

It may fairly be stated that the usefulness of the career of Caventon has laid society under a debt of gratitude for the deep, practical, and lasting value of his discoveries.

Lovers of the weird and ghastly will be satisfied by the perusal of the account of the poisoned arrow manufacture as carried on by the Samoan islanders, and related to the Fellows of the Linnean Society by the Rev. Thomas Powell.

These children of nature show a pertinacity in inventive evilness which seems almost incredible.

An old chief of Efat (one of the Sandwich Islands) thus reveals the mystery of the poison craft to his son Pomare.

The initiated, distinguished by wearing the os femoris of a pig inserted between the arm and armet, watch for the death of a sufferer laid low by any acute disease which may be accompanied by delirium.

They note the place of his burial, and six months afterwards open his grave by stealth. From thence they carry the large bones of both extremities, and the parietal bones of the skull. Of these, by sundry sawing, polishing, and scraping, they make the points of spears and arrows.

For a saw they use the spines of the large Echinus, of which they need a goodly quantity, as the edge is soon worn out.

Three plants are pressed into service for the poison—the Toto, the Putu, and the Fanuamamala.

The most virulent is the Toto, a large tree. When cut, a white milk oxides which causes blindness: its sap introduced into the circulation causes death.

A band of freebooters once landed on the western end of Efat: proceeding eastward, they came to a place called Mole, where the inhabitants prepared for them an inhospitable reception.

There was an enclosure of water on the beach, which at low tide served both for drinking and for bathing. The people dried some Toto leaves and strewed them in the water. No sooner landed, the invaders rushed into the cooling lake. Immediately they were thrown into convulsive agonies: those who only bathed, became blind—those who drank, died.

These three plants, the Toto being chief, carefully picked and desiccated, were pounded in a mortar with a wooden pestle made of the ara. Next a species of *Holothuria* was taken from the lagoon, put into a leaf of *Calo-casia Indica*, and placed in the shade till it became a putrid liquid, to which the powder was added in sufficient quantity to form a thin paste.

One last ingredient was Na Lât, or wasp food, and the villainous concoction was worked up with the expressed juice of an old cocoa nut, stirred for a month at intervals till the mass became a dark cloudy oil, which, when bottled and preserved for twelve months, was fit for use. Great precautions were employed in applying the poison to the tips of spears and arrows. Every trace of moisture was got rid of by careful drying in the smoke.

The poison, taken internally, was always fatal; when received into the system on the spear point, recovery might be effected by making instantaneous free incisions in different parts of the body, to allow the escape of the poisoned blood. Whenever fatal the same symptoms followed—convulsions, lock-jaw, death.

Tetanus was one of the invariable results. Imagine the old Samoan noting the grave for which delirium had found an occupant, exhuming the fever-corpses to barb his weapons with the poisoned bones; then, with a skill and patience which no modern pharmacist could surpass, mixing, evaporating, and perfecting his vile compound. These warriors of the Sandwich

Isles drew no bow at a venture when the darts transfixed the brave Commodore Goodenough, and the whole history leads us vividly back to the old derivation—*τόξον λόγος*, and shows us from whence toxicology originally got its name.

THE CHEMICAL SOCIETY.—To those pharmacists who are likewise Fellows of the Chemical Society, and may write after their names the initials F.C.S., the following note of what took place recently at Burlington House will not be unacceptable:—

"The actual addition to the numerical strength of the Chemical Society" (we quote from Dr. Gladstone) "this year is not only considerably less than half that of last year, but it is also less by about two-fifths than the mean increase of the three previous years." This diminution is to be attributed to a persistent system of blackballing adopted by nine of the Junior Fellows, who have thus expressed their discontent with the action of the council on election matters, the question being complicated by charges brought against the conduct of the journal of the society and its Committee of Publication. In carrying out their opposition, which undoubtedly was dictated by conscientious motives, positive injustice has been inflicted by the exclusion of some candidates who were fairly entitled to the rights of Fellowship—bitterness of feeling has been engendered, and the prosperity of the association has been endangered. The proceedings of the anniversary meeting were described last month, and we have now to give some particulars of the extraordinary general meeting which was summoned on Thursday, May 31, in answer to a written requisition from a number of the Fellows, including twenty-two members and three vice-presidents. Mr. De la Rue suggested that the time for each speaker should be limited to three minutes, a proposal in which Dr. Gladstone, the president, concurred.

The first question was—The status and functions of the Publication Committee, and the present condition of the journal of the society.

Mr. Kingzett remarked upon the importance of harmony between the governing body and the executive. He would approach the subject in no captious spirit, and firmly expected a good result from the discussion. The Committee of Publication had no legal existence. Originally it consisted of four members, till in 1871 it was increased to twenty-two, as it stands at present. By Bye-law XIV. the power of censorship was vested in the hands of the council, and not in the Committee of Publication. One of the members of the committee lived in Switzerland, others never attended, and there was thus reason for dissatisfaction. One paper had been rejected because results differing from the opinion of the executive had been obtained; while some papers had been read which were not subsequently published. He proposed that any censorship exercised should take place *before* the papers were read, and for that purpose he recommended a permanent committee of five. As regards the journal itself they were greatly indebted to the indefatigable exertions of their editor, Mr. Watts: it was, still, no unfair criticism to state that original papers often waited five months, and were occasionally sacrificed to abstracts of less importance, some of which were worthless. In the date of publication there was an average interval of forty days. Mr. Kingzett therefore proposed the following resolution:—"That in the opinion of this meeting the Publication Committee should be dissolved and reconstituted."

Professor Odling seconded the resolution, after Mr. Kingzett had consented to withdraw the original ending of the motion which ran thus—"and he reconstructed more in consonance with the wishes of the Fellows." He had made inquiries about the delay in publication, and found Mr. Neison's previous strictures perfectly correct [Mr. Neison is one of the Junior Fellows who have been energetic in the expression

of grievances], and he advocated a change in the committee. That papers should be decided upon before being read would present many difficulties, and though it was the rule in some other societies he thought it would be objectionable. Such a course would lead to still further postponement. He might say that the question was already under the consideration of the council, and it was the council and not the committee with whom the final decision rested. The question was whether the right of censorship had been exercised with judgment and good faith. Papers of the president and of the treasurer had been rejected, but he was not aware that that had ever been the case with Mr. Neison—as far as he knew, it had not. He urged the Fellows to put the best construction on affairs, as every man was liable to an error of judgment.

Mr. Neison said that he had no personal complaint to make, some of his papers having been published *in extenso*; but when Fellows learnt that papers were submitted to the council there had been a feeling of surprise. Papers that had been read were supposed to be afterwards printed, for, if it was worth being read, in his opinion it was worth being published. In other societies more despatch was used, as the value of a communication could be easily ascertained. When coming from a man of standing there could be little difficulty in deciding on its merits—ten minutes or half an hour would be ample time to investigate its general bearings.

Mr. Howard quoted from the charter and bye-laws that the right of selection rested with the council. Many things were worth reading which were not worth being printed. Supervision had been exercised with regard to himself, which he had borne with remarkable equanimity.

Mr. De la Rue observed that though a few minutes might be sufficient to decide on the general merits of a paper to be read, it was quite otherwise with regard to a decision on its permanent retention. Four members originally formed the Committee of Revision, but that number became insufficient. It was quite necessary not to delay the reading of a paper, but it might be found to contain a record of work which had been gone over before, and hence its publication might wisely be withdrawn.

Mr. Pearsall suggested that authors should furnish abstracts of their communications, and after a short conversation Mr. Kingzett's resolution was put and carried almost, though not quite, unanimously.

Our readers who are recipients of the journal of the Chemical Society will gather from the above that the mode of its publication will be remodelled.

The second question was:—"The proper steps to be taken to place the election of Fellows and Associates of the society on such a footing as will remove the existing dissatisfaction, and especially with reference to the means of securing proper qualifications in the candidates."

Dr. Paul proposed the following resolution:—"That in the opinion of this meeting the principles on which the election of Fellows has hitherto been promoted are unsatisfactory and necessitate revision." It had been a matter of regret to all the Fellows that for the last months and years there had been dissatisfaction amongst the Fellows as to the mode of election. He was not wedded to the opinion that the title F.C.S. should express a qualification of chemical ability. He disclaimed that—but it was obvious that the council felt compelled to provide the sinews of war, and therefore they sought to promote the election of the largest number of Fellows. The complaint was that admission had been made too easy, and in some cases men were elected with whom they could not associate. He believed that the case might be met by developing the character of the grade of the Associate. He had access to the meetings and the library, he could buy the journal at a nominal price; and therefore he would alter the bye-laws, to the effect that every candidate for Fellowship should have been an Associate for a stated period.

Mr. Friswell seconded the resolution. The title F.C.S. should

not convey a guarantee of chemical competence, but there was an idea nevertheless amongst the public that it did give a certain qualification. It was not desirable that it should be used for trade purposes, yet one, for instance, employed it in connection with Encore Whisky, a second to recommend building to the Fellows annually not more than twenty of the more materials, and a third to advertise gas burners. The best plan was to provide a committee to decide upon the names of candidates.

Mr. Tribe proposed as an amendment:—"That this society is of opinion that the present system of election to its Fellowship does not promote its interests or sustain its dignity, and that in place of this system the council of the society should recommend meritorious candidates for election to its Fellowship." Unfortunately, he read his speech from manuscript, and his rounded periods, which might have been appropriate in an essay, were productive of much innocent amusement. In the confusion, we think we understood him to say that future Associates should pay the same subscription as the present Fellows.

For a short time no one appeared ready to support this amendment, when he met with an admirable seconder, Mr. Herbert, who spoke well, with a distinct voice, and to the point. The hour was now advancing, and rapid opinions were delivered.

Mr. Hartley entirely disagreed with the proposal to limit the number of Fellows.

Mr. De la Rue did not think that the plan of electing Associates first and then passing them up as Fellows was at all feasible. The title of F.C.S. would doubtless be used improperly in certain cases, and there was no chance of entirely preventing that. Taking an old treasurer's point of view, he certainly should regret a diminution of the number of Fellows, and he would therefore propose another amendment, which was—"That in the opinion of this meeting the election of Fellows should only take place on certain dates, to be fixed by the council beforehand."

Professor Roscoe seconded the amendment. He had a personal interest in the matter, for he had brought forward a candidate of his own who was every way qualified for election, one who would never by any chance use the title F.C.S. improperly, but who was a hardworking, conscientious science teacher. He could see no reason why a man should be rejected on that ground. He thought such a class were specially the object of the care of the society, and they did quite as much useful service as many amongst themselves. If the present system of exclusion were carried on, he was not quite sure that it would be altogether desirable to remain connected with the society.

Professor Odling, who spoke last, and with great warmth, was astounded at the spirit of exclusiveness which had been shown, coming as it did, not from the seniors, who might be supposed to be conservative, but from the junior section of the society, from whom they rather expected the too generous liberality of youth. What might happen when these in course of time became the seniors and directed the affairs of the executive he really could not tell. When men of real chemical distinction, such as several whom he mentioned, guaranteed the fitness for election of a candidate, he thought deference might be paid to their opinion. It was absurd that they should set themselves in judgment upon such men. The charter of the society had been granted in order that they should advance chemical knowledge, and not to found distinctions of caste. He entirely disagreed with Mr. Tribe's amendment. It seemed to him a plan for allowing Associates to have the privilege of riding in a second-class carriage while paying first-class fare. He would invite every man who took an interest in chemistry to become a Fellow of the society and take in its journal. He would go farther than that, and say that if there were any extra advantage in the title F.C.S. let him have it. Take it and welcome.

Mr. De la Rue's amendment was then put and carried by an overwhelming majority. On being put as a substantive motion the same result ensued.

We may be pardoned, from the length of this notice, for offering no comment upon these proceedings, but we may express a hope that the dissatisfaction which has existed between a section of the Fellows and the executive may be allowed to come to an amicable conclusion, and we join in the sentiments expressed in a resolution that was subsequently carried unanimously:—"That this meeting thanks the council for the frank explanations given on the points that have been discussed, and begs to express its confidence in the action of the council."

The Pharmaceutical Society.

THE annual meeting was held on May 16, and was fairly well attended. Mr. John Williams, president, was in the chair.

In opening the proceedings the chairman delivered an address apparently intended to show how noble were the objects of the Pharmaceutical Society, how important it was that it should not degenerate into a trade union, and how desirable it was that pharmacists should ever aim at the highest pharmaceutical objects of existence. The president wants to see a great many mere provincial associations "in strict association with the parent society in Bloomsbury Square," and imbued, we suppose, with the obedience to that body which is the highest pharmaceutical virtue. By this means Mr. Williams hopes "that the organisation of the trade, both for professional and business purposes will become complete." How such an organisation is to become "complete" in presence of the attacks to which the trade has lately been subject, and in face of the conditions suggested, namely strict association with Bloomsbury Square and rigid exclusion of trade union ideas, the speaker did not think it necessary to explain. He, however, concluded his address by a patronising reference to the Trade Association, which, though not perfect, Mr. Williams acquitted of the mortal sin of antagonism to the Pharmaceutical Society.

The report, which we printed and commented upon in our last, was taken as read, and its adoption was moved by Mr. Jones, of Leamington, the president of the Chemists' and Druggists' Trade Association, and seconded by Mr. Slipper, of London. Both these gentlemen discussed the report with the utmost amiability, and occupied about twenty minutes between them in advocating its platitudes.

Mr. VIZER, of Brighton, raised the first note of discord somewhat sharply, complaining of the absence of all reference to several important pharmaceutical subjects in the council's report. Neither milk of sulphur, nor co-operative stores, nor counter-prescribing had stirred the equanimity of the worthy souls of the council. Mr. Vizer then quoted from the Medical Bill of Dr. Lush, just printed, and this led him to a discussion of the prescribing question generally, and he urged the council to give the subject its attention.

Mr. YOUNG having spoken in the same strain, the president explained that the bill had only been printed a day or two, and that it could not therefore have been referred to in the report.

Mr. URWICK thought it a pity that the council had done nothing in regard to the case of Mr. Shepperley at Nottingham. They might at least have instructed their solicitor to watch the case.

Mr. MUMBY (Gosport) next made a very good speech respecting the Benevolent Fund. He said a country chemist might wish to subscribe 5s. a year towards a charitable fund, but he did not care to hand over his hard earned money to the council to be invested in 3 per cents., and thus to feel that practically he was subscribing 1½d. per annum. He thought ten more annuitants might be added to the list, and if the council thus tempted the benevolence of chemists they would find a much larger proportion of the chemists of the country on their subscription list.

Mr. FICK, of Hackney, followed with a rush of eloquence which quite startled the society. Although speaking with much apparent indignation, Mr. Fitch was singularly careful in his statements, and his speech had a considerable effect. He told how he had taken a prescription containing liquor arsenicalis to some co-operative stores in Regent Street, where he had also bought some tincture of aconite and some vermin killer. The medicine was labelled with the name of a Mr. Flowers, of 112

Victoria Street, who he had since ascertained was dead, and it appeared that this particular store had bought up the stock of labels. He had written to the editor of the *Pharmaceutical Journal*, but his letter had not been noticed. He had also written to the secretary of the society, who had promised attention, but proceedings did not seem to have been taken. He thought it was absurd to fine a chemist for selling syrup of poppies without a poison label, and let these stores go on selling poisons how they liked; and it was his desire that the incoming council should be urged by resolution to prosecute those stores whose secretary and directors were not on the register. At a later stage of the proceedings, Mr. Fitch moved a resolution conveying such an opinion from that meeting to the incoming council, and Mr. Vizer seconded it. Mr. Sandford and the president seemed to think that by passing such a resolution the council would be bound to take proceedings, whether they thought it wise or not. Mr. Hampson, on the other hand, spoke warmly in favour of the policy of prosecuting the stores. For the sake of harmony the resolution was withdrawn, but the opinion of the meeting was none the less decided and apparent.

Mr. HUMPAGE referred to the attempt now made by the Apothecaries' Company to interfere with the trade of a chemist and druggist. He alluded to an important pamphlet published by Jacob Bell in 1841, in which was related how the apothecaries acted towards the druggists in 1813 and 1814, and how the trade acted in reference to that attack. Finding their interests were about to be interfered with, they met together—all the leading men in London taking part—and said they would not assent to this Act of the apothecaries, which would virtually crush them. The meetings were carried on for more than a year, and at last a resolution was drawn up, and agreed to by the Apothecaries' Company, that a certain clause should be inserted in the Act to leave chemists exactly as they then were, and that their successors should not be interfered with in the future. The apothecaries did not like it, as was clearly shown in this pamphlet, but they could not do better; therefore they accepted that clause, which was referred to counsel before it was agreed to, in order to prevent any mistake. From the year 1815 up to the year 1841, that clause did seem to protect chemists and druggists, for it was not upon record that anyone had been prosecuted for the period of 26 years. Now, if the Apothecaries' Company, having the desire to interfere, took no action for 26 years, it was manifest it felt it could not. In 1841 Mr. Hawes brought forward a bill, and there was then an attempt made to interfere with the rights of chemists. Their action was then repeated: the trade was called together and an arrangement was again come to, that a clause should be inserted so that the rights of chemists should not be interfered with in any shape or form. Mr. Humpage argued that what had been done in defence of trade interests on two previous occasions should be done again now. He thought the council might let it be known that it was prepared to defend the legitimate rights of the trade.

In reference to the early agitation referred to by Mr. Humpage, Mr. FLUX (the society's solicitor) reminded the meeting that the term employed in those days was uniformly "counter practice," and he remarked it might be well to recur to that. It was dangerous to let medical men set up a cry on the word "prescribing." Mr. Flux stated in an emphatic manner his thorough and honest conviction that, if there were a well-conducted, manly fight on the subject, no chemist who kept within his own doors had anything to fear.

Mr. CHURCHILL, of Birmingham, also expressed his surprise at the meagreness of the report in certain respects. He called forth a little sparring between the Trade Association and the society's solicitor as to the prosecution of offenders against the Pharmacy Act. Mr. Churchill also criticised the society's journal somewhat sharply, remarking that members were somewhat in the position, in regard to trade information, of those Birmingham Conservatives who bought the Conservative paper for their politics, and the Liberal one for their news.

Mr. GOSTLING, of Diss, also attacked the conduct of the official journal.

In the course of some general remarks Mr. FAIRLIE said it would be satisfactory to know if the North British Branch was a profitable portion of the society's work. He thought the balance sheet might be a little more detailed.

The PRESIDENT said the North British Branch yielded a profit of about 100l. a year to the society.

Mr. REYNOLDS, of Leeds, said the meeting had shown clearly that, whether the council had a policy or not, the society certainly had one. The council was evidently looked to to concern itself more with the protection of trade interests than it had done heretofore. He thought it might have taken the credit in the milk of sulphur fight, and certainly it ought not to stand aside and let the Trade Association undertake exclusively the defence of the trade in the medical attacks. He trusted the council would not in future treat trade interests after the manner of the gentleman who said to the waiter after dinner, "What is the smallest coin I can give you without being thought mean?"

The PRESIDENT thought the introduction of a Medical Acts Amendment Bill might be a good opportunity for the introduction of a clause defuelling the position of chemists and druggists.

Mr. FRAZER said he should have been disposed to have spoken at some length on some of the subjects discussed that day were it not for the fact that his views had been generally expressed in an address at Glasgow, which those who cared for would find in *THE CHEMIST AND DRUGGIST* of the previous day.

Mr. ANDREWS expressed surprise at the absence from the report of any allusion to the Nottingham prescribing case.

Some further reference being made to Dr. Lush's bill, Mr. ATKINS said he could assure the meeting that in that gentleman's opinion at least there was nothing in his bill which was intended in the slightest degree to infringe the rights of chemists. From personal acquaintance with Dr. Lush, he was confident that he desired nothing that would be injurious to the interests of chemists.

The meeting was closed by a vote of thanks to the retiring council.

ELECTION OF PHARMACEUTICAL COUNCIL.

The following was the result of the election, declared on May 18:—

| | | | |
|-----------------|-------|------------------|-----|
| Hanbury | 1,000 | Gostling | 700 |
| Bottle | 989 | Cracknell | 682 |
| Greenish | 961 | | |
| Hampson | 936 | Deane | 674 |
| Atherton | 920 | Vizer | 590 |
| Shaw | 895 | Stacey | 587 |
| Williams | 881 | Baldon | 546 |
| Rimington | 845 | Cnbley | 546 |
| Betty | 842 | Richardson | 496 |
| Churchill | 829 | Wills | 456 |
| Robbins | 789 | Bulgin | 455 |
| Brown | 772 | Guyer | 439 |

Messrs. Churchill (Birmingham) and Gostling (Diss) are the new members of council in the room of Messrs. Frazer (Glasgow) and Stacey (London).

THE BENEVOLENT FUND DINNER.

A VERY successful dinner in aid of the Benevolent Fund, promoted by the Pharmaceutical Society, was held at the Freemasons' Tavern on May 15. Mr. John Williams, president of the society, occupied the chair, and the company numbered over 200, and included several distinguished members of the medical profession, such as Dr. Risdon Benuett, President of the College of Physicians; Dr. Buchanan, President of the Medical Society; Mr. Ernest Hart; Dr. de Vrij, of the Hague, &c. The speeches after dinner were rather above the average of after-dinner orations generally, and included an able history and advocacy of the fund from the chairman, and short essays on the relation of pharmacy to medicine by Mr. Cornelius Hanbury, who proposed, and Dr. Risdon Bennett, who acknowledged, the toast of "The Medical Profession." Mr. Hanbury modestly pleaded the right of the pharmacist to do a very little prescribing, perhaps in the hope of bringing out the official chief of the physicians. Unfortunately, however, neither gentleman could hear a word of what was uttered by the other. Captain-Commandant Richardson, of Leicester, and Captain Walker, of the 13th Lancashire, made patriotic speeches in reply to the usual military toast. Dr. Buchanan proposed "The Pharmaceutical Society," to which the president responded, and Mr. Bottle toasted the North British Branch in the person of Mr. Mackay. Mr. W. S. Brown, of Manchester, complimented the visitors, and Dr. de Vrij, in acknowledging the toast, took the opportunity as a candid friend of comparing English pharmacy unfavourably with the same profession on the Continent. Some professional singers gave a few ballads at intervals, which

seemed to be much appreciated. After the chairman's speech in support of the Benevolent Fund, a long list of donations and subscriptions was read by Mr. R. Bremridge, reaching in all to 1,400l.

COUNCIL MEETING.

THE first meeting of the new council was held on June 6. The absent members were Messrs. Brown, Hanbury, and Mackay. Mr. Williams was re-elected president, Mr. Savage vice-president, and Mr. Hanbury treasurer. The committees and the officials of the society were also re-appointed.

The council, it appears, had objected to the application of a proposed association of professional chemists to have their rules, &c., registered by the Board of Trade. We are not told when or why this objection had been made.

The PRESIDENT now read a letter from Dr. Frankland, president of the new association, stating that the committee had considered the objections made by the council, and being anxious to meet the views of the Pharmaceutical Society, recommended that the name be changed to that of the "Institute of Chemistry," and that the clause with regard to granting certificates, to which objection had been taken, should be struck out. He added that no interference with the rights and privileges of the Pharmaceutical Society was contemplated, and under these circumstances he hoped that all objection would now be withdrawn. The president and others thought this was quite satisfactory, but Mr. Betty suggested that it would be as well to examine closely the new rules before withdrawing all opposition.

Mr. SANDFORD gave a detailed account of the exploits of the deputation from the council which had been charged to see Dr. Lush and others in regard to the new Medical Acts Amendment Bill. Mr. Sandford's object in giving such full particulars was to secure to the Pharmaceutical Council the glory of having induced Dr. Lush to withdraw the clause prohibiting any person unregistered under the Medical Act from practising medicine or surgery for gain.

Mr. ATKINS wished to repeat his eulogy of Dr. Lush, and was certain that that gentleman had not had the slightest intention of interfering with chemists and druggists.

Mr. HAMPSON said that it was necessary to take note of the words of Dr. Lush's bill rather than of that gentleman's intentions. He was gratified to find that there was now no longer any need for opposition, and it was also satisfactory that the House of Commons had discovered by means of the action taken throughout the country that the chemists were now an organised body.

Dr. Lush had signified to Mr. Atkins his intention to withdraw the objectionable clause in his Bill on May 19. Mr. Atkins wrote to Mr. Sandford to that effect, and the latter gentleman received the information on the 21st. By a misunderstanding about the privacy of this communication the important fact was not made public. Mr. Churchill (probably on behalf of the Trade Association) remarked that it was a great pity that Dr. Lush's communication had not been made public earlier.

It was resolved to elect six annuitants on the Benevolent Fund next October. The secretary reported that the amount of ordinary annual subscriptions received up to the present time was about 150l. less than at the same date last year.

It was resolved that Mr. William Southall be invited to deliver the inaugural address to the students in October next.

The reports of Dr. Headlam Greenhow and Dr. Douglas MacLagan respecting the London and Edinburgh examinations respectively were received. The first was very brief, and merely expressed the writer's confidence that the examinations were an "ample guarantee." Dr. MacLagan, however, as he has done before, gave an analysis of the results of the year's examinations, showing comparatively the subjects of failure. In the Minor, which alone was adapted to such an analysis, 47 candidates had passed and 37 had failed. The proportion of failures was rather higher than last year, but Dr. MacLagan thinks he observed in the successful candidates a superior proficiency to what had been the case in previous years. Candidates are required to attain in every subject at least four-tenths of the maximum number of marks. The failures were as under:—

| | | | | | | |
|-----------|----------------------|---------|----|----|----|----|
| Failed in | Prescription | Reading | .. | .. | .. | 4 |
| " | Practical Dispensing | .. | .. | .. | .. | 4 |
| " | Materia Medica | .. | .. | .. | .. | 4 |
| " | Pharmacy | .. | .. | .. | .. | 12 |
| " | Chemistry | .. | .. | .. | .. | 13 |
| " | Botany | .. | .. | .. | .. | 17 |

The Chemists' and Druggists' Trade Association.

THE first annual general meeting of this association was held at the Freemason's Tavern, Great Queen Street, London, on Tuesday, May 15, 1877, Mr. S. U. Jones, of Lenington, the president, in the chair.

The meeting was largely attended, not only by metropolitan chemists and representatives of almost every town of importance in England, but also by several gentlemen from Scotland.

The CHAIRMAN, having read letters expressive of regret for inability to attend from Mr. Cross, of Shrewsbury, and Mr. Earle, of Hull, said he had great pleasure in meeting his fellow chemists in the metropolis at a time when it was necessary to form a strong bond of union among them. During the past year they had been attacked on various subjects, some of which had been pretty well settled; but the "prescribing question," one of the most serious chemists ever had to contend with, was still under consideration. In cases of humanity, he thought none of them should shrink from prescribing, as he himself had done, and should continue to do; but to go out visiting, or to have a back room, to give it the appearance of a medical man's consulting room, was a thing they must all avoid if they wished to keep out of the meshes of the law. Half the chemists in the country might shut up their shops if they were not to be allowed to prescribe for simple colds or sore throats, but no prudent chemist would undertake a case where danger was looming. He did not see why so much should have been made of Mr. Shepperley's looking down a man's throat, as his object in doing it was simply to see whether the complaint were serious or simple. They were unanimous in their determination to have that case argued by the best possible counsel, and if they were unsuccessful they would have to take some other course. He hoped the chemists of the country would cordially and generously join with the association in protecting the interests of the trade.

Mr. BELL (Hull), in moving the adoption of the report, complimented the Executive Committee on their success, and trusted that every chemist and druggist in the kingdom would become a member of the association, and support it, not only by subscriptions but by donations, as money was wanted to carry on the great battle now looming. If prescribing in their shops were done away with, most of them would have to look after some other trade which was not so harassed as theirs. He considered that no trade was so harassed as that of the chemist and druggist. He congratulated the Executive Committee on the excellent appointment they had made in their secretary, as they had one of the best men it was possible to have.

Mr. VIZER (Brighton), in seconding the resolution, said he regarded the association whose birthday they were then commemorating as a wonderful success. The report showed that to a great extent the apathy which had existed amongst them had been shaken off. He was glad that the idea at one time entertained by many, that the association was a mere trade speculation, had been wiped out. The association was not antagonistic to the Pharmaceutical Society, which society was originated for the purpose of defending the trade against legislation, then endeavoured to be carried out, by which the chemists were to be brought under the auspices of the medical profession, licensed annually to carry on their business, and to be under the entire control of a body composed of medical men. By that Act a chemist, in the event of his prescribing over the counter, was to be liable to a fine of 20*l.*, the amount which one of their friends in the country had been kindly mulcted of. The difficulty raised by the medical profession in 1814 was that the then existing chemists were not qualified to carry on their business satisfactorily. A few friends then came forward, and, uniting themselves, carried a bill by which they were chartered to carry on the education of the chemists. A resolution was then passed that the society then formed (the Pharmaceutical Society) should be a protective society and also a benevolent society. The Pharmaceutical Society had done its duty in the matter of education, but as a protective society they had failed to protect the interests of chemists and druggists; consequently the formation of the present association was a necessity. He was glad the milk of sulphur question was settled. There was another benefit in the fact that the association would defend them in cases where informers purchased

their drugs for analysis. The association had their own analyst: from these causes half their horror of the informer was gone. It was a great satisfaction to know that no expense would be spared to provide the very best available talent for the defence of the ease of prescribing; at the same time he was pleased to find that, whilst they would defend cases of prescribing, they discouraged indiscriminate prescribing. Many chemists undoubtedly laid themselves out for prescribing, but he did not consider that to be their vocation. They were essentially dispensers of medicine, but it would be impossible to carry on their business if they could not express an opinion of what was best for this or that simple ailment. Last week only a lady of position (notwithstanding his recommending her to consult her family physician) had become quite pugnacious to him when he declined to give her some simple advice. He was delighted to see in the report that a draft case was being prepared for submission to counsel upon the co-operative stores, upon which matter the Pharmaceutical Society had lacked wofully. That society had the power to carry out the Act which was passed to protect the trade against illegal tradesmen; they required that qualification should be the test of their being able to carry on the business; yet he knew of a case where a poor widow was obliged to sell her business at a great sacrifice because she was unable to carry it on under the charge of a qualified assistant. He did not think, therefore, a man should be allowed to put the arms of the Pharmaceutical Society on a wrapper and make that his passport for trading in the way it was now done at co-operative stores. He was an advocate for trying the legality of this.

Mr. ASDNEWS (London), in supporting the resolution, drew attention to Dr. Lush's bill, then passing through Parliament.

Mr. SKIPPER (London) supported the resolution. He said that if a chemist were to be prohibited from performing a surgical operation that would preclude him from drawing a tooth, which was not only a surgical operation, but a very important one. Most people would prefer for that purpose the practised hand of the druggist to the inexperienced hand of a young surgeon, who only took out about one in a month. He thanked the numerous gentlemen present for the support they had given to the association. It was a most alarming thing for a druggist to stand alone when obliged to employ lawyers and go into evidence, as the profits of a month would be soon eaten up.

Mr. BELGIN (Gravesend), who also supported the motion, said if the proposed bill became law their trade was ruined. They must stick together and fight, and endeavour to win the day. He had no sympathy with a man sending his footman out to tout, but if a man came to him with a cut, a sore throat, a cold, or a cough, he would advise him what to take, and whenever the day came that he could not do that he would sell his business for 10*l.* to the first man who asked him for it, and he himself would go to Canada or Australia.

Mr. PRESTON, as a member of the wholesale trade, felt bound to recognise the value of a society formed for the express purpose of protecting the retail trade. One advantage from its existence was already apparent—analysts were now more on their guard, and their charges were not of so frivolous a character. Formerly, many prosecutions appeared to have been instituted rather for the purpose of bringing into notoriety the name of the analyst than for the protection of the public. With regard to the question of prescribing, everyone practically acquainted with the trade knew that it was impossible for chemists and druggists to carry on their business if they were to be precluded from giving advice to their customers. For the protection of the public an Act of Parliament had been passed, enforcing an examination by the Pharmaceutical Society. Were gentlemen who had submitted to this ordeal, and had incurred considerable expense in their education, to show the value of that test and to evince their own intelligence to their customers by saying, "We can give you no information at all?" (Laughter.) Of course, care should be taken not to infringe the law. But it was well known that a large number of chemists, from the experience which they had acquired in the treatment of trifling ailments, were far better fitted to deal with such cases than medical men. Why should not chemists be permitted to do that which they could perform as well as, and in many cases better than, those who had received an education specially adapted to that purpose. The society would, no doubt, be a valuable one, but its success depended upon its being supported by those who were principally interested in its welfare, and not by extraneous assistance. It would reflect

disgrace upon the large body of chemists and druggists in England and Scotland if they did not come forward with the moderate subscription required from them, and so support the society that it should become a strong organisation, affording that protection to all its members which he felt sure was thoroughly intended by the committee who drew up this interesting report, and to whom they all owed so many thanks. (Loud cheers.)

Mr. ELLWOOD (Leominster) said that if the prohibition from ordinary counter prescribing was of importance in the metropolis, it was still more so to those who like himself lived in a small provincial town. If the bill before Parliament should pass, and they were also to be prohibited from performing the smallest acts of surgery, though he would not sell his business for 10*l.*, yet he would be prepared to sell it to the highest bidder. There were four other chemists in his town, but it was not his fault that they did not subscribe to the association. Counter prescribing, tooth extraction, and the minor operations of surgery, were, in his town, very important items of their returns. He had long ceased to subscribe to the Pharmaceutical Society, as that society had long ceased to protect the interests of chemists and druggists, and had degenerated from its original purpose to being a representative only of the metropolitan chemists and druggists. (No, no.) Well, if they did not represent those interests, they represented simply the interests of Bloomshury Square. (Hear, hear, and laughter.) He had simply passed the Minor examination, and should he sorry to give the extra money to pass the next examination, not (as his friends present could testify) from lack of knowledge, but because he could not conscientiously give that support to the Pharmaceutical Society which some members of the trade appeared to think it should have. A bill was brought into Parliament, he forgot by whom, to stop them from prescribing drugs for horses and other animals. It would therefore appear that not only surgeons, but veterinary surgeons, must have formed a conspiracy against the poor chemist and druggist. In conclusion, he expressed the hope that the funds of the association would be expended solely in protecting their trade interests, and for no other purpose.

Mr. DEAN (Bow) said that, coming from the extreme East End of London, he was deeply interested in this subject. He did not believe in a chemist giving "advice gratis," or imitating surgeons' labels, "at home" at certain hours; but he did believe in fairly stating that they were chemists and druggists, and that they were able and willing to prescribe for simple complaints. Without this it would be impossible to carry on business with profit to themselves or benefit to a neighbourhood inhabited by the poorer classes. Of course it could not be done without, to some extent, coming in contact with the surgeons. Having been in business in that kind of locality for about twelve years, he was proud to say that he had done not a small amount of prescribing; but he had never got into any trouble about the matter. He had been very careful to send away any serious case, and was on friendly terms with a large number of surgeons practising in his neighbourhood. Supposing the proposed Act of Parliament to be passed, he supposed there would be no harm in putting "cough mixture" on a bottle, and saying, "If you have a hottle of this mixture it will do you good," and he imagined there was no difference between doing that and saying, "I can mix you something up which will do you good." He congratulated the association on having taken up the prescribing question, which, perhaps, could be better appreciated at the East End than the West. So far from sending people at the East End to a physician in the way described by the gentleman from Brighton (Mr. Vizer), many of the inhabitants had not even a shilling whorowith to pay; and to say, therefore, to people of that class, "I cannot prescribe for you," would be to lose their custom. Let them honestly meet the surgeons and say, "We do not want to take your patients away, but we want to live: we are standing behind the counter all day, and you will allow us to know the action of salts or senna." He heartily congratulated the association on its success.

Mr. MELLIN (Wimbledon), in supporting the resolution, said that if the Pharmaceutical Society had done its duty years ago there would have been no necessity for the formation of the present society. His district was much affected by the co-operative stores. The other day he was asked "How do you sell your hair restorer?" "6*s.* a bottle." "O! I can get it at the Stores for 3*s.* 9*d.*" How were they to live if their customers were to be allowed to buy things at that price?

Mr. CHURCHILL (Birmingham), as a member of the Finance

Committee, desired to express his gratitude to the large wholesale dealers in London for their generous support of this association, though their main support must come from themselves. The annual subscription was fixed as low as possible, in order that no chemist should be excluded by having to pay a high price.

The resolution, upon being put to the meeting, was carried unanimously.

Mr. OWEN, in moving the re-election of the president, vice-president, hon. treasurer, and hon. secretary, said he thought the society at Bloomshury Square did not deserve all that had been said about it. They had several delicate questions to deal with which did not come before the public; and they had always great difficulty in dealing with the subjects raised by this association. He trusted the relations between the two societies would always be most friendly, and that they would both endeavour to protect the interests of their calling.

Mr. CRODON (London), in seconding the resolution, referred to some cases in his experience where counter-prescribing had been the means of saving life. The chemist was really and must be the apothecary in poorer districts. He remembered a man who gave advice for 1*s.*, but some people who have not the 1*s.* get their advice and medicine at the chemist's for half that amount. A friend of his at the East End had often prescribed, and it was with great pleasure he said that, when he was carried to his grave, four or five miles out of London, 400 or 500 followed him to his grave, which was the greatest possible respect they could show him.

The resolution was carried unanimously.

Mr. URWICK (Pimlico), having moved the re-election of the Executive Committee, and Mr. SHEPPERLEY (Nottingham), who seconded it, having briefly referred to his case, the resolution was carried unanimously.

It was proposed by Mr. HORNCastle (London), seconded by Mr. FAIRLIE (Glasgow), and carried unanimously:—

That the gentlemen now constituting the General Committee be re-appointed for the ensuing year, together with the Scotch committee, and that the following gentlemen be requested to allow their names to be added thereto.

(The list included a number of new and influential names).

Resolutions were then unanimously passed re-appointing Mr. Glaisyer as solicitor, Mr. Haydon as secretary, Dr. Attfield as analytical referee, Messrs. Laundry, Harrison, Harris and Caldicott as auditors, and Messrs. Lloyd's Banking Co. as bankers of the association for the ensuing year.

Votes of thanks to the London committee and the chairman terminated the meeting, which was immediately followed by the public meeting of the trade.

A PUBLIC meeting of the trade was held at the conclusion of the annual meeting of the Chemists' and Druggists' Trade Association, Mr. Preston, of the firm of Hodgkinson, Prestons & King, presiding.

The CHAIRMAN said the gentlemen who were originally connected with the Chemists' and Druggists' Trade Association were moved by a desire to benefit the trade, which result it must ultimately accomplish. Much work had been done by that society in the past, but their present object was to enlist the sympathy of all chemists and druggists, more especially those residing in the metropolis, and thus to form a strong and useful association, which would promote the benefit of all associated with the trade in a legitimate manner. If this could not be done by ordinary means it would clearly become necessary to apply to Parliament for an Act, that they might be protected as well as those gentlemen who were connected with the professions. Of late there had been too much of an idiom of thinking of chemists and druggists as professional men, but he thought that it should not be lost sight of that they were connected with a trade, and that they were bound to protect their trade interests. He believed the trade of the chemist and druggist was one of the most important that could be carried on. He believed the public generally recognised that they were men of ability and intelligence, and if an Act of Parliament were introduced for their protection there would be no difficulty in enlisting the sympathies of members of Parliament on their behalf.

Mr. POUND moved, and Mr. WIGGIN seconded:—

That this meeting of pharmaceutical chemists and chemists and druggists heartily approves of the formation of the Chemists' and Druggists' Trade Association, and pledges itself to support the same by every means in its power.

Mr. BARCLAY (Birmingham), vice-president of the Chemists' and Druggists' Trade Association, said that the work set before the Executive Committee at the Conference at Birmingham was "the protection of the legitimate interests of chemists and druggists from unfair attacks and encroachments, and the promotion of their common welfare." He thanked the meeting for their re-appointment as the Executive Committee, as it showed they did not lack the confidence of the chemists and druggists. He then reviewed the work of the past year, pointing out that the programme then set before them was—

1. "The defence of the members from vexatious and unjust prosecutions under the Adulteration and Medical Acts." In dealing with this point he referred to the milk of sulphur case, and said that chemists might feel themselves secure if they conducted their business legitimately, as the Chemists' and Druggists' Trade Association had been like a thunder-stroke amongst the analysts, who, he imagined, instead of instituting paltry prosecutions here and there, were reviewing their position. Chemists might, in fact, now say "*Nemo me impune lacessit*." He also referred to the case of Mr. Shopperley, at Nottingham, and to the formation of a Medical Defence Association at Birmingham, which association had commenced proceedings against several herbalists and one chemist and druggist there; but owing to the action taken by the association the case of the chemist and druggist had not yet been before the court.

2. "The amendment of the Pharmacy Act to prevent the sale of scheduled poisons by unregistered men under cover of the Patent Medicine Stamp."

3. "The exemption of all registered chemists and druggists from serving on juries."

These matters they had not yet been able to deal with.

4. "The defence of the trade from encroachments by unauthorised dealers in drugs, whether individuals or co-operative stores." Upon this point the speaker referred to the hardships suffered by chemists from the action of the co-operative stores, and trusted the Pharmaceutical Society would join with them in that respect, and endeavour to put down all illicit trading. The matter had been placed in the hands of two of the most trusty members of the Executive, and he hoped some alteration would be made in the law in this respect.

5. "To watch the proceedings of Parliament, with a view to prevent any legislation injurious to the interests of the chemists and druggists." Last session Sir Wm. Fraser gave notice that he would bring in a bill on the subject, but when he was applied to, to state the object of his bill, it turned out that his mind was a perfect blank on the subject, and that he was quite ready to receive impressions. However, as Sir Wm. Fraser had retired, they must wait until some other gentleman took up the matter. They had been told that two or three bills were now before the House, and he could assure them that the Executive might be depended upon to do their duty in this respect. He then referred to the amount received in subscriptions, &c., during the past year, and expressed a hope that every gentleman would go forth from the meeting a canvasser, and that they would use their influence to induce other gentlemen to join their association. In Birmingham they had a motto which he hoped would be the motto of the association: he commended that motto to one and all, for it was "Forward."

Mr. ROBERT HAMPSON (London) said that, occupying a seat at the council of the Pharmaceutical Society, he felt at first considerable hesitancy in joining this association, but after carefully considering the position of the trade and a man's independence in respect to his calling and connections, he felt he ought to join it and support it as far as possible. Their success, of course, would depend on the number of members who joined and the energy of those members; and the fact that 3,000 members had already joined was a good augury for the future. He felt his tongue might wag a little freely, as his year of office on the Pharmaceutical Council had expired, and he might not have a seat at the next board. The Pharmaceutical Society had important work to do, but he thought that there should be no antagonism between the two, and that every man who was qualified should join that association as well as this. He took a great interest in the co-operative stores question, which he thought should be faced. With regard to the prescribing question, he felt that if they simply folded their hands and remained content they would not only lose their independence and individuality, but they would also find the aggressive spirit grow stronger, and they would be trampled upon, which was a thing that he did not believe in. The chemists and druggists, if united, could exercise great power over the Legislature, and

could prevent any aggressive bill being passed through Parliament.

Mr. MACKENZIE (Edinburgh) regarded this Trade Association as a necessity. He considered it presumptive arrogance on the part of those who were now, by unjust legislation, attempting to interfere with the chemists. A medical man's education was now little more than a farce, and many a medical man knew little or nothing of the weapons with which he had to deal. [Mr. Mackenzie writes to us to say that in this expression he only referred to the pharmaceutical education—that which a medical man passes.] He knew a man occupying an important position—a professor—who told him that after he had been licensed at one of the first universities to practise he was frightened to write a prescription, in case some intelligent chemist should have occasion to laugh at some inaccuracy. He (the speaker) maintained that that condition of things was pretty general. What would the medical gentlemen think if some friends of the chemists were to introduce a bill to meet the altered state of things? Mr. Barclay had commended one motto to them; he would commend to them another, viz., "Defence, not defiance." They were determined to defend themselves, and when they had been roused by insult after insult he had a right to ask those who attempted to interfere with them, What right had they to interfere? But because they were chemists and druggists they seemed to be the butt and target of everybody who chose to pitch into them. As a member of the Pharmaceutical Society he ventured to say, in reference to the severe things which had been said of them, that he thought the gentlemen who had made the remarks would have done better to have exercised more charity. He thought that good men and true, who were at the bottom of the Pharmaceutical Conference, had been misunderstood. It was an old saying in Scotland that an ill-beginning has often a good ending. He trusted, therefore, they would not be off their guard because they were flushed with victory in their first year, as that would be the enemy's advantage. They must each endeavour to bring one additional member during the coming year: by doing so they would do the Pharmaceutical Society no harm, but would show all aggressors that they were in earnest and meant to defend themselves.

Mr. G. H. WRIGHT (London) said, as an illustration of what had been said by Mr. Mackenzie of the gentleman who was afraid to write a prescription, he would mention, having been a chemist many years, that he had never before seen such a prescription as had been put into his hands, which had been sent to a leading chemist the day before to be dispensed. The prescription was—

| | | | | | | |
|---------------------|----|----|----|----|----|-------|
| Acid nit. mur. dil. | .. | .. | .. | .. | .. | 3iij. |
| Liq. potasse | .. | .. | .. | .. | .. | 3iij. |
| Liq. taraxaci | .. | .. | .. | .. | .. | 5iij. |

Mr. HOLDSWORTH (Birmingham), in a brief address, referred to the heavy expenses of the past year, and urged upon the meeting the desirability of letting effective co-operation take the place of idle sympathy during the coming year.

Mr. WADE (London) said, having only recently come into the association, he might mention the reasons for his not doing so, as he believed they operated with a large section of the London chemists at first, though now there was a determination in all quarters to support the association. One reason was that it was not thought proper to encourage a society which might foster adulteration and the sale of inferior drugs, and another reason was the attempt to suppress the co-operative stores. But when the question of counter-prescribing was brought forward, the key-note was touched which would unlock the pockets of the great bulk of London chemists. The interests of the trade at large were not represented on the Pharmaceutical Council. If any of them had a business where prescriptions kept piling in, so that they had no time to look at a man's throat or his tongue, what would they care about people who wanted them to prescribe? Were there men to represent them on the Pharmaceutical Council who had a mixed business to attend to? This trade association could be the salvation of the trade. He took it for granted that they were met to uphold the law and not to infringe the law, and that they had all up to the present time acted conscientiously in prescribing for simple ailments over the counter. When the Act of 1815 was passed, he believed a line was distinctly drawn between the medical practitioner and the chemist, and that they had a perfect right to prescribe over the counter, while in no way dared they visit. If that had been the case for 60 years, why was it now in-

fringed? If 20 years gave a title to possession, surely 60 years founded them three times over in that which they had practised. He felt sure they all regretted the question had arisen, because they ought to work with the medical practitioner. He did not believe medical men desired to interfere with them in their simple practice, and why should they all suffer because some few chemists had overstepped the mark? Those few were only the outcasts of their body, as the prosecuting surgeons were of the medical men. It was only some pottifogging little surgeons, with no practice of their own, who were jealous of the chemists who had the confidence of the public. Many men had acted as assistants to surgeons, and had been accustomed to prescribe in the absence of their masters, and yet, after perhaps forty years' experience, they were not to be considered able to prescribe for simple ailments. He thought those who had been in practice any number of years were far better qualified to judge of the simple ailments of men, women and children than a parcel of boys and young men who had nothing but a diploma to show for their education. It was a question for the public, on whose behalf they must, if needs be, go to Parliament to prevent them from being dragooned into going to a medical man and paying 2s. 6d. or 3s., when for 2d. or 3d. the chemist could put their child right. They did not press forward the prescribing trade, but they could not turn a deaf ear to the public, who pressed it upon them. It was said that at the East End little was done in the way of mixing prescriptions; but there were places also within a stone's throw of Buckingham Palace where they did not see a prescription once a day, because the medical men of the neighbourhood sent their own medicine out. Where was the justice, if the medical men mixed their own prescriptions, of preventing the chemist from looking at a man's tongue, feeling his pulse, or giving him a pill. If that state of things prevailed they must apply to Parliament for an Act to prevent medical men mixing their own prescriptions. What was sauce for the goose was sauce for the gander. He hoped, if they went into court upon the prescribing case, that they would be successful.

The resolution was then put to the meeting and carried unanimously.

Mr. REINHARDT (Leeds) congratulated the Trade Association on their present chairman, for though some slightly jarring strings had been touched, they all felt that union was strength, and he thought the time for union had now come when they saw the President of the Pharmaceutical Society in the chair.

The CHAIRMAN explained that he was neither the president of that society, nor on the council; but he was put in the chair, he supposed, simply because he happened to be a wholesale druggist.

Mr. REINHARDT wished the chairman were president, as then, he thought, the provinces would be more effectively represented. He regarded it as the fault of the provincial chemist that the Pharmaceutical Society did not represent them. He was glad to find there was a prospect of every future candidate setting before them a programme of his views. He then addressed the meeting upon the prescribing question, and concluded by referring to a letter written by him to THE CHEMIST AND DRUGGIST, offering to go from one end of the country to the other to induce the trade to make a stand upon this question, simply taking his hotel and travelling expenses. That offer he now repeated.

Mr. JONES (Leamington), as President of the Chemists' and Druggists' Trade Association, returned thanks for the offer of Mr. Reinhardt.

Mr. COREY, as a country chemist, desired to add a few words on the subject of counter prescribing, which affected them more than it did town chemists, who saw more prescriptions in a day than they did in the country. Still he did not think they had in the country so many enemies amongst the medical men as there were in town. If a child were taken to a medical man, he would say, "I am not going to mix three powders for 2d." If, therefore, the chemist was not to do it, who was? This gentleman then referred to a case of ignorance on the part of two medical men as to the proper dose to give a lady after her confinement, and concluded by offering to collect subscriptions in his own district and forward them to the secretary, thus saving expensiveness to the association. He suggested the adoption of this plan in all parts of the kingdom.

Mr. YOUNG (London) briefly addressed the meeting on the subject of the bill now before Parliament, and suggested that every chemist should ask his member to oppose it.

Mr. GOSTLING (Diss) said that in his small country town, with villages surrounding it, and people scattered here, there,

and everywhere, the distance between the inhabitants and the medical men, of whom there were but few, was sometimes so great that it was not possible the medical men could supply the wants of the district. He was sure that hundreds of thousands of signatures could be obtained to a petition against the bill now before Parliament. If that bill were passed they might meet most of them close their shops, and train up their sons as apothecaries instead of chemists and druggists.

A vote of thanks to the chairman was then unanimously passed.

A MEETING of the Executive Committee was held at the Inns of Court Hotel, High Holborn, London, W.C., on the 14th ult., at 8 p.m., Mr. T. Barclay (Birmingham), vice-president, in the chair. Present:—Messrs. Andrews (London), Churchill (Birmingham), Delves (Exeter), Fairlie (Glasgow), Greenish (London), Hampson (London), Holdsworth (Birmingham), Johnson (Manchester), Laird (Dundee), Mackenzie (Edinburgh), Matthews (London), G. Walker (Coventry), and the solicitor of the association.

The minutes of the previous meetings of the Executive and Sub-Committees were read and approved, and the reports of the Law, Finance and London Committees were adopted unanimously, and a special vote of thanks was proposed by the chairman, seconded by Mr. Churchill, and carried unanimously, to the London Committee for the ability and energy with which they had arranged the annual general meeting.

Resolutions were then passed, re-appointing the solicitor, secretary, analytical referee, bankers, and auditors for the ensuing year.

A meeting of the General Committee was held at the Freemasons' Tavern, Great Queen Street, London, W.C., on the 15th ult., at 11.30 a.m., Mr. Thomas Greenish in the chair. Present:—Messrs. Andrews (London), Bell (Hull), Bulgin (Gravesend), Churchill (Birmingham), Delves (Exeter), Fairlie (Glasgow), Hampson (London), Holdsworth (Birmingham), Johnson (Manchester), Laird (Dundee), Mackenzie (Edinburgh), Matthews (London), Owen (London), Rimmington (Bradford), Shepperley (Nottingham), Walker (Coventry), Wright (London), and others. The report was taken as read, and motions passed confirming the resolutions of the Executive Committee.

The following gentlemen were requested to allow their names to be added to the General Committee:—

| | |
|---|--|
| Mr. Aston, Birmingham | Mr. H. H. Pollard, Ryde, Isle of Wight |
| " J. Averill, Stafford | " J. Phillips, Wigan |
| " W. Bostock, Ashton-under-Lyne | " Geo. Pattison, London |
| " E. N. Bunt, London | " J. R. Robinson, Dewsbury |
| " W. J. Bates, Macclesfield | " S. Serpell, Truro |
| " W. B. Cordley, Colchester | " J. R. Sturton, Peterborough |
| " J. Cornelius, Teignmouth | " A. W. Smith, Rye |
| " J. Cox, Grantham | " James Slipper, London |
| " Charles Croydon, London | " Charles Umney, London |
| " W. H. Cotterill, Dover | " Thomas Webster, Bangor |
| " Cornelius Hanbury, London | " J. B. Westrup, London |
| " Kirby James, Beverley | " John Wade, London |
| " J. Lowe, Chesterfield | " Alfred Wigginton, London |
| " T. C. Lindsey, Rochdale | " George Woolley, Manchester |
| " H. Long, Notting Hill | " Thomas Williams, Cardiff |
| " Jno. Owen, Newcastle-on-Tyne | " Thomas Williams, Llandudno |
| " Barnard S. Proctor, Newcastle-on-Tyne | |

Mr. F. ANDREWS then proposed to take the feeling of the committee as to whether it would be advisable as an association to send a subscription to the Benevolent Fund. He thought they could not spend 5l. or 10l. in a much better way.

Mr. BARCLAY would gladly support any such proposal if it were limited to a small amount. He hoped that when thoroughly organised the association would collect systematically for the Benevolent Fund.

The CHAIRMAN thought such a proposal premature. As they were a fighting community it was advisable to hold all their resources well in hand. It was a subject which might well be considered at some future time.

Mr. OWEN agreed fully with the chairman. They did not know what their expenses would be in the law-suit in which they were engaged, and he thought that they ought not yet to vote any money for benevolent purposes.

Mr. HAMPSON was sorry to differ from his friend Mr. Owen. Although the association was young, he believed it had very strong ribs, and he had confidence in the future. He felt that it would do the trade good to help the fund, and that he was warranted in supporting the proposal.

Mr. ANDREWS said that as the only objection against his pro-

posals was one of money, he would move "That the sum of ten guineas be given by this association to the Benevolent Fund of the Pharmaceutical Society."

Mr. MACKENZIE and Mr. CHURCHILL thought it would be a breach of good faith to devote money which had been collected for a special object to benevolent purposes. The latter gentleman hoped the members would do much individually for the fund.

After a few remarks from Mr. HAMPSON, Mr. Andrews withdrew the motion.

Mr. Wright, the chairman, Messrs. Rimmington, Johnson and Fairlie then spoke, and the meeting closed with a vote of thanks to the chairman.

ANOTHER meeting of the Executive Committee was held at Birmingham on the 25th ult., Mr. S. U. JONES, president, in the chair; Mr. Thomas Barclay, vice-president. Present:—Messrs. Andrews (London), Arbaster (Birmingham), Brevitt (Wolverhampton), Churchill (Birmingham), Crose (Shrewsbury), Greaves (Chesterfield), Greenish (London), Hampson (London), Jervis (Sheffield), Laird (Dundee), Southall (Birmingham), Shaw (Liverpool), Walker (Birmingham), and the solicitor of the association.

After formal business, it was unanimously resolved:—

That the association should take immediate steps to oppose "A Bill to Amend the Medical Act of 1858," now before the House of Commons, on its second reading.

That steps should be taken to invite Members of Parliament to oppose the Medical Bill, now before the House of Commons, on its second reading.

It was thought inadvisable to occasion any delay by waiting to co-operate with the Pharmaceutical Council. A deputation was appointed to see various Members of Parliament, to secure opposition to the bill on its second reading. A petition was drawn up, and the secretary was instructed to send circulars to prominent pharmacists in the most important towns, urging them to do their utmost to obtain signatures to the petitions.

Law, Finance, and General Purposes Committees were then appointed, and a vote of thanks to the president terminated the proceedings.

The results of the action taken were that S. S. Lloyd, Esq., M.P., consented to oppose the bill on its second reading, and more than 100 petitions against the bill were presented to the House of Commons. The second reading came on on June 1, when Dr. Lush moved that the order be read and discharged, remarking that it was his intention to move for leave to introduce another bill on the same subject. The motion was agreed to, and the bill withdrawn.

Provincial Reports.

IRELAND.

PHARMACEUTICAL SOCIETY OF IRELAND.

THE monthly meeting of the council of the above society was held at the College of Physicians, Kildare Street, on Wednesday, June 4, Sir D. J. Corrigan, Bart., president, in the chair. The following were present:—Dr. Aquilla Smith, vice-president, Mr. William Allen, Dr. Collins, Mr. J. Goodwin, Mr. Hayes, Mr. Hodgson, Mr. Holmes, Dr. Macnamara, Mr. Oldham, Mr. Payne (Belfast), Professor Tichborne, and Dr. Whitaker (Belfast).

Some correspondence of no general interest was first disposed of.

In accordance with notice of motion by Mr. PAYNE, seconded by Dr. WHITAKER, it was resolved—

That the words "when required" be omitted from the regulation relating to the chemical portion of the examination of candidates for the qualification of pharmaceutical chemists.

Mr. PAYNE explained that his object was that it should not be left optional with the examiners whether they should give a practical examination or not.

After some discussion it was agreed to unanimously.

On the motion of Mr. PAYNE, seconded by Professor TICHBORNE, it was resolved—

That a committee be appointed to consider if for the better working of the Pharmacy Act of Ireland, 1875, any of its clauses require amendment, and to present a report containing the proposed amendments, with any remarks they may think fit to bring before the council respecting them.

The following were appointed the committee to carry out the resolution. The proposer and seconder, and Dr. Collins, Mr. Hayes, Mr. Hodgson, and Dr. Whitaker.

On the motion of Professor TICHBORNE, seconded by Mr. PAYNE, it was unanimously resolved—

That the president and council of the Pharmaceutical Society of Ireland forward a letter to the president of the British Pharmaceutical Conference, expressing a hope that the said Conference will hold its meetings as usual in connection with the British Association on its visit to Dublin in 1878.

The following spoke in favour of the resolution:—Dr. Smith, vice-president, Dr. Macnamara, Dr. Whitaker, Mr. Holme.

Some bills were ordered to be paid.

In reply to the PRESIDENT, Mr. HODGSON, hon. treasurer, stated that the funds of the association were in a very satisfactory condition.

The next examinations will take place on Monday and Wednesday, July 2 and 4.

HULL.

A SPECIAL meeting of the chemists of Hull and district, convened by the Hull Chemists' Association, was held at the Cross Keys Hotel on Wednesday evening, May 30. Mr. C. B. Bell was elected chairman, and the following resolutions were unanimously agreed to.

Resolved—

That this meeting pledges its strongest opposition to the latter part of Clause 1 of the bill intitled, "A Bill to Amend the Medical Act of 1858," which, if it became law, would render every chemist who supplied the most simple medicine on his own recommendation, or who performed the most trivial surgical operation and charged for it, liable upon summary conviction to a penalty of 20l.

Resolved—

That this meeting desires to express its hearty thanks to the Executive Committee of the Chemists' and Druggists' Trade Association for the active opposition they have displayed against the objectionable part of the bill, and hopes that their efforts will be crowned with success.

MANCHESTER.

THE concluding meeting of the session of the Manchester Chemists' and Druggists' Association and School of Pharmacy was held at the Memorial Hall, Albert Square, on Friday evening, May 11. Mr. J. T. Slugg, F.R.A.S., vice-president, occupied the chair. The minutes of the previous meeting having been read by Mr. Bengor, and confirmed, Mr. Louis Siebold, F.C.S., read his annual report of the classes, which was to the effect that four courses of lectures had been delivered during the session, viz., thirty-three lectures on pharmaceutical chemistry; twenty-seven lectures on materia medica and pharmacy; fifteen lectures on botany; and twenty lectures on qualitative analysis. Twenty-five students entered for the chemistry course, twenty-three for materia medica and pharmacy, nineteen for botany, and seventeen for the course on analytical chemistry, making a total of eighty-four entries, or thirty-two more than in the previous year. The botany lectures were delivered by Mr. Leo H. Grindon, and were highly appreciated by all attending his class. The fees were 30s. for the chemistry course, 25s. for the materia medica and pharmacy, 20s. for the analytical course, or 3l. 5s. for the three; and 15s. for that on botany. The total amount of fees received was 91l. 10s., or 29l. in excess of those of last session. The attendance throughout the session was good, as was the interest and attention shown. At competitive examinations held at the close of the session prizes were awarded to the successful competitors as follows:—

Chemistry.

1st prize to Mr. C. Challinor; 2nd prize to Mr. Frederic Percy Wood.

Materia Medica and Pharmacy.

1st prize to Mr. Frederic Percy Wood; 2nd prize to Mr. T. C. Blaymire.

Botany.

1st prize to Mr. C. Challinor; 2nd prize to Mr. J. C. Crompton.

The result of the session is highly encouraging, and goes far to prove that the Manchester School of Pharmacy may becomforth be regarded as a self-supporting institution.

The Chairman and other members having spoken on the very encouraging report just read, Mr. George S. Woolley took the chair, and Mr. J. T. Slugg delivered a short lecture on

THE CHEMISTRY OF THE SUN,

of which the following is a brief report:—

Mr. Slugg said that previous to the invention of the telescope nothing was known as to the physical constitution of the sun. In 1769 Dr. A. Wilson, as the result of careful observation, discovered that sun-spots were cavities in a luminous atmosphere surrounding a darker body. Sir W. Herschel afterwards assumed that there are three concentric coverings of the sun—first a vaporous, then a luminous, and lastly, a cloudy and imperfectly transparent atmosphere. It was not till 1842 that attention was directed to the existence of the red prominences which are noticed surrounding the black disc seen in the sky during a total eclipse of the sun. The first question asked was, "Do they belong to the sun or to the moon?" This question was not answered till 1851, when a total eclipse of the sun took place, and when the Astronomer Royal produced evidence that they belonged to the sun. In 1860 this was confirmed by the application of photography during the eclipse of that year. Still the question, "What are they?" remained unsolved. In 1868 a total eclipse occurred which was visible in India, when for the first time that marvellous instrument—the spectroscope—discovered that these flames principally consist of hydrogen gas. Up to this point, owing to the glare of the sun, they could only be observed during a total eclipse of the sun. Astronomers, however, never rested until they discovered a method of observing them whenever the sun is visible. The spectroscope has revealed to us the existence in the sun of iron, nickel, zinc, copper, chromium, magnesium, calcium, sodium, potassium, barium, strontium, manganese, lead, cobalt, and one or two new elements, as well as hydrogen. After describing the great solar storm witnessed by Professor Young in 1871, the lecturer expressed his admiration of the able and devoted labours of such men as Huggins and Leekyer in this field of science, and stated his belief that before long we shall be in possession of further important information respecting the physical constitution of the sun.

A cordial vote of thanks to Mr. Slugg for his interesting lecture was carried by acclamation.

NOTTINGHAM.

THE annual meeting of the Nottingham and Notts Chemists' Association was held at the room of the association, Britannia Chambers, Pelham Street, on May 25, the chair being occupied by the president, Mr. J. H. Atherton, F.C.S. After the transaction of some preliminary business, the hon. secretary, Mr. Roberts Jackson, read the annual report of the council, which indicated a fair general and financial success.

Four monthly meetings had been held during the past year, at which interesting papers and lectures were given, besides which two open meetings of the trade had been called for the consideration of matters of importance not properly within the legal limits of discussion by the association.

The attendance at the former was very limited, while the latter were largely attended. The council had again to express regret at the want of interest shown in the educational work of the association, as exemplified by the poor attendance of the members at the general meetings; on the other hand, it was gratifying to find that most of the chemists in the town were members of the association. The number of members was 55 (51 town and 4 country), being an increase of five on the number recorded last year, while the number of associates was only 20, against 27 in the previous session.

The council, at the commencement of the session, arranged a course of lectures on pharmaceutical chemistry, to which 18 associates subscribed, besides which, as an inducement to the practical study of chemistry, 16 associates were presented with

tickets for laboratory practice at the Mechanics' Institution. In connection with the former class, the council offered two prizes for competition, but only five students presented themselves for examination—the names of the successful candidates to be announced, and the prizes delivered, at the next meeting. The room of the association had been open every Friday night during the session for the use of the associates. Twenty-one meetings had been held, with very variable attendance, numerous at the commencement, with the usual dwindling down of numbers afterwards, giving the poor average of six during the whole session.

The council have to acknowledge with gratitude the handsome donation of 10*l.* from Mr. F. J. Clarke, of Lincoln. The annual supper was held in January at the Flying Horse Hotel, and, it is almost needless to say, proved by far the most successful meeting of the year.

The society has this year a balance in hand of 25*l.* 5*s.* 1*d.*, and it is for the incoming council to determine in what manner a portion of that sum can be most effectively used to promote the educational objects of the association.

The report alluded to the Nottingham prescribing case, and expressed an opinion that moderate counter prescribing was too much a public convenience to be abolished.

The following officers were then re-elected:—President, Mr. J. H. Atherton, F.C.S.; vice-president, Mr. R. Fitz-Hugh, F.C.S.; treasurer, Mr. J. Rayner; hon. secretary, Mr. Roberts Jackson; council, Messrs. C. A. Bolton, T. B. Fletcher, J. J. Jenkins, J. Lewis, J. Lomas, W. Smith, F. White, and J. Wilford.

A vote of thanks to the officers and council for their past services brought the proceedings to a conclusion.

PLYMOUTH.

At a large and influential meeting of the chemists and druggists of Plymouth, Devonport, and Stonehouse, held at the Exmouth Hall, Manor Street, Stonehouse, on May 25, 1877, the following resolutions were unanimously passed:—

Moved by CHARLES ROWE, Esq., J.P., seconded by Mr. J. H. FILMER, and resolved—

That in the opinion of this meeting the bill now before Parliament entitled, "The Medical Acts Amendment Act, 1877," if passed, will make it illegal for chemists and druggists to give advice to their customers in their own shops respecting the use of medicines, or to continue their counter practice according to their long established usage.

Moved by Mr. S. B. TURNEY, seconded by Mr. J. ALLEN, and resolved—

That this would be a most unjust interference with the existing rights and customs of the trade, and injurious to the best interests of the public.

Moved by Mr. S. MAITLAND, seconded by Mr. J. BURNWOOD, and resolved—

That this meeting therefore considers it a duty to the public and themselves to use every effort to obtain such an amendment of the first clause as shall secure the long established usages of the trade.

Moved by Mr. W. WILSON, seconded by Mr. S. DAYMON, and resolved—

That a copy of the foregoing resolutions be sent to the Home Secretary, and to each of the local Members of Parliament.

MEDICAL MONOPOLY.—The *National Anti-Compulsory Vaccination Reporter* commences a short article on the Medical Trades Union with the following not altogether undeserved attack:—"Another feature of the hideous medical despotism which curses and disgraces this country, is to be found in the recent prosecutions of chemists and herbalists for giving advice and selling herb medicines. Now as neither of these parties enjoy the benefit of laws forcing anyone to visit their shops or ask their advice, it would appear that they were prosecuted and fined simply for doing good and Christian acts in assisting their neighbours with the fruits of their experience to the best of their ability, when called upon by those for help. But this, it appears, entails, in a Christian country, a penalty of 20*l.*! And why? Because the State-chartered doctors want all the people's pence for their own pockets!"

NAMES OF BRITISH MEDICINAL PLANTS.

By W. G. PIPER.

Coquelicot.—2. Its Derivatives.

WE find in Job xxi. 40 of the authorised version of the Bible this sentence, "Let Cockle grow instead of Barley." In some of the older versions this word Cockle is often used to represent noisome weeds, and frequently it takes the place now filled by the word Taros.

When the word is used generally, it undoubtedly means "hurtful weeds." But it has more than one meaning. Some of the older lexicographers, such as Johnson and Phillips, define it as meaning the Corn Rose or Corn Poppy. Since Gerard's time (1597), and perhaps earlier, botanists have called the *Lychnis* or *Agrostemma Githago* by the name of Corn Cockle, and this is most likely to be the true meaning of the word.

Richardson, in his "Dictionary," derives the word from A.-S. "Coccan" (pronounced chocan), to choke, and infers that the name was given to the plant because it choked and killed the corn. Richardson was not a botanist, and he probably did not know the plant he was speaking of, for though the derivation he proposes might suit the Spurrey or the Vetches, it is not at all applicable to the *Agrostemma*.

Dr. Johnson, in his "Border Botany," surmises that the original meaning of Cockle was Corn Poppy, and that it was only transferred to the *Agrostemma* by mistake. He is supported in this by the two dictionary writers mentioned, but by no botanist. Still the derivation which he proposes seems to be the correct one, though the method is not. He derives it, like Coccone and Coquelicot, from the Celtic "Coeh," red.

The derivation I propose is grounded on several facts, none of which are conclusive, but which taken together have some weight. In the first place the form of the word points to the possibility of its being a diminutive. In many languages a termination containing the "l" sound has a diminutive force, and a large proportion of the English words so terminated are diminutives. Secondly, we have in the old Norman French, as now spoken in Guernsey, the word Coeq, meaning poppy, which certainly might be the mother form of Cockle. Thirdly, over the greater part of England and Scotland this plant (the *Lychnis*) is known locally by the names "Popple" and "Papple." It is possible that these words are diminutives of Poppy. Here seems to be a coincidence. We have a well-known plant growing among corn, with large brilliant flowers, known by two names, Coeq and Poppy. Another equally well-known plant, also growing among corn, but with smaller and less brilliant flowers, is called Cockle and Popple. Are we to say that this is a mere coincidence?

Lastly, in Davies' "Welsh Botany," we are told that the *Lychnis* is called, among other names, "Pabi yr gwenith." This means Corn Poppy.

So, still retaining Dr. Johnson's etym. of Coeh for Cockono, Coeq and Coquelicot, I consider that the name Cockle is a diminutive form of the old Norman name Coeq, and that Cockle means a little Poppy. It is easy to understand how the word came to include not only that but many other plants, alike hurtful weeds.

3. Its Co-Derivatives. Coccus and its Derivatives.

I have mentioned that a co-derivative of Coquelicot is to be found in the Greek. This is Kokkos, and it is curious, not only on its own account, but also for its progeny and synonyms.

Next to Tyrian purple, the dye now called scarlet was the most celebrated among the ancients. It was obtained from a small, round, berry-like thing found sticking to the oak. It was soft, pulpy, and liable to rot and give birth to little worms. This last fact is noteworthy.

The discovery of this dye is lost in antiquity. There are numerous guesses about it, but they are contradictory, and only point to the fact that it came to the Greeks from the East, and that from Greece it gradually spread over the rest of Europe. It is several times mentioned in the Pentateuch, in other parts of the Old Testament, and in the oldest extant Pagan writings. The colour it produced and the name it bears point to its derivation from the Celtic Coeh—Kokkos is the red dye. Perhaps it would be more logical to say that both Coeh and Coccus are from some older word—they are brothers, not parent and child. We must not forget that this thing had several other names, to which we will return.

I have forgotten to mention that the Kokkos is really the female of the *Coccus Ilicis*, an insect of the class Hemiptera, and first cousin to the Cochineal.

To get a clear idea of the causes of the changes which the meaning of words undergoes, we must consider what words really are. Locke, in his "Essay on the Human Understanding," 1st ed., 1715, vol. ii., p. 5, gives the following illustration to explain their nature:—"They, in every man's mouth stand for the ideas he has, and which he would express by them. A child having taken notice of nothing else in the metal he hears called Gold but the shining yellow colour, he applies the word Gold only to his own idea of that colour, and nothing else; and therefore calls the same colour in a peacock's tail, Gold. Another, that has better observed, adds to shining yellow great weight; and then the sound Gold, when he uses it, stands for a complex idea of a shining yellow and very weighty substance. Another adds to those qualities fusibility; and then the word Gold to him signifies a body, bright yellow, fusible, and very heavy. Another adds malleability. Each of these uses equally the word Gold when they have occasion to express the idea which they have applied to it; but it is evident that each can apply it only to his own idea; nor can he make it stand for such a complex idea as he has not." This illustration, carefully considered, will throw much light on those changes in the meaning of words which we have all observed.

Kokkos, to the Greek who first used it, stood for his complex idea of the thing itself. He had got an idea, more or less clear and complete, of a rounded body about as big as a pea, pulpy, putrescent, found on trees, and yielding a brilliant red dye. In course of time other Greeks began to make the word Kokkos stand for their own less complete ideas. They left out the distinctive idea of its dyeing power, and to them it meant something found on trees, rounded, of the size of a pea, &c. And of necessity the word Kokkos would at once be made to include all things of which similar ideas could be gathered. All things found on trees, rounded and pulpy, would be called Kokkos. And so we find, not in Greek only, but also in Latin, that Kokkos or Coccus, which at first meant the scarlet berry, came to mean berries of all kinds. Numbers of words in these and all languages are derived from the word in this second sense, some of which are of special interest to pharmacists.

Cocculus Indicus at once starts to the front. *Cocculus* is a diminutive of *Coccus*, and *Indicus* is one of several distinguishing names which have at various times been given to it.

By a change of ideas a rounded shell-fish got the name of a berry, and was called Cochlea and Cockle, and in course of time another mollusc, the snail, came to be included under it. From this latter sense we get two or three words in English. Cockle, the name of a shell-fish, is of course the English representative of the Latin word. Besides, we have Cochleary and Cochleous, words few of us have met with, but which are, nevertheless, English, and mean spiral or twisted. We find such expressions as a cochleous shell, a cochleary staircase. From the second sense of "twisted," hence snarled, entangled, confused, we get a cockling sea, applied to a short, confused, tossing sea, such as is found in the chops of the Channel.

From Cochlea in the sense of a Cockle we get other words as often on the tongues and in the thoughts of pharmacists as any in the language. There is no doubt that the first spoons man ever used were the shells of molluscs, such as the Cockle and the mussel. Hence a spoon came to be called Cochlear and Cochleare.

There is a plant known to the Gormans as Löffelkraut, to the French as Herbe aux Cueillets, to the English as Spoonwort and Scoury Grass. The German, French, and English names have the same meaning, and a name so widely spread must have some foundation. We find that the plant to which the name was first given has leaves much like old-fashioned spoons. Who named this plant Cochlearia I do not know. It bears the name now, and not only it but a plant well known to pharmacists, the *Cochlearia Armoracia*. Many a student has been puzzled to understand how the derivation universally given could explain the application of the name to the horseradish. Little about its large oblong leaves that is spoon-like. But remember that the name has come to it in another way, and all becomes clear. We can understand how little Mr. Strongithorn of to-day got his name if we remember that his ancestor was a giant. The *Cochlearia Officinalis*, the true scoury grass, is the founder of the name and family.

The strangeness of these changes must strike everyone, and need not be talked about.

I have not troubled to show how many descendants of this family we may find in Greek, Latin, and the younger languages. They can be easily discovered, and have an interest which makes them worth the search. Another derivative of Cocculus, surpassing in interest all that have been mentioned, remains to be spoken of next month.

I beg to thank my correspondents for their communications, and I shall be very glad to receive any further notes or queries on plant names. Any questions addressed to W. G. Piper, Earlsam Cottage, Brentwood, Essex, will receive my best attention.

DR. OSCAR LIEBREICH ON CHLORAL.*

AFTER some remarks on impurities in general, Dr. Liebreich goes on to say:—

I have good reason to believe that a large proportion of the chloral, both solid and liquid, which is at present employed in medicine is not trustworthy in respect to its purity. I am, moreover, well assured, and I wish to draw the attention of practitioners to this point, that many of the impurities of chloral, when it is not prepared with great strictness and tested with scrupulous accuracy, are of a kind seriously to detract from its uniformity of effect.

Such impurities are calculated to have both a directly and indirectly mischievous effect. Directly, because some of these impurities contravene the simply hypnotic and anæsthetic powers of chloral, and confer upon the so-called chloral with which they are mixed irritating and exciting properties; indirectly, because by rendering the chloral in certain cases feebly hypnotic, they render the practitioner or the patient uncertain of the proper dose; they lead to multiplication of doses, and, in consequence, they tend to produce fatal results. The comparative inertness of the first doses leads to the re-duplication of the dose at too frequent intervals, until suddenly a fatal result is produced. The accidents which have occurred frequently in England are, I am satisfied, largely due to the impurities and uncertainty of the many preparations, and especially of many of the solutions in vogue. A study of the nature of these impurities is therefore just now imperatively called for.

Without entering on the history of chloral, we may remind ourselves that it was first discovered by Liebig in 1830 and that the product was always a cake chloral, with very numerous impurities. *It is altogether impossible to purify this cake chloral.* It is, however, now known by what process to produce clearly crystallised chloral in dry transparent crystals, which are free from the impurities, these being held in solution in the mother-liquor. Such crystals alone are reliable. Crystals of chloral hydrate which are not dry and transparent are not at all trustworthy.

In one of the most recent and justly reputed treatises of *matéria medica*, published in England, I find the characters of chloral described thus:—"In colourless crystals (needles or acute rhomboidal plates)." I must, however, observe that *chloral hydrate in needles is quite unworthy of the confidence of the practitioner.* It may very well be, and is very likely to be, another chlorated substance, or very impure chloral hydrate. In America especially these impure forms of chloral hydrate are largely in favour, and everywhere there is a tendency to employ them where the consideration of relative cheapness in wholesale quantities is an element in the decision, and where the dangers of even apparently slight impurity in chloral hydrate are not adequately recognised.

The chloral hydrate which is not perfectly pure may sometimes be observed to become more acid. This increase of acidity is not due to the decomposition of the chloral hydrate itself, but to the decomposition of an accompanying impurity (chloro-carbonic acid) which sets free hydrochloric acid. When this occurs in the stomach it gives rise to great irritation, and I believe that when it occurs in the blood it causes great constitutional excitement. Hydrochloric acid is not in itself dangerous; but in these cases it is the indication of the existing impurities which give rise to hydrochloric acid by their decomposition, and which are, as clinical experience proves, in themselves irritating and dangerous. Thus, if a physician make the experiment of giving a dose of pure chloral hydrate with a

little hydrochloric acid, and of giving a dose of the impure chloral hydrate which produces hydrochloric acid by decomposition as I have mentioned, he will find a great difference; in the first case, he will get the true hypnotic results of chloral hydrate; in the latter he will find symptoms of cerebral excitement and nervous irritation.

A more intense, and often a very different effect, is produced when a toxic substance is produced by decomposition within the blood, and in direct contact with the tissues of the organism.

The observations of Dr. Russell on the excessive alkalinity of the blood in typhoid fever have an extremely interesting chemical relation to the clinically observed fact that chloral hydrate is extraordinarily potent in its effects in that disease, and must be administered only in very small doses during the stages of excitement and delirium in the disease: its effect in such doses, however, being the more useful that opium is contraindicated. Ten grains of chloral hydrate will often suffice to produce hypnotic effects, while in the stage of excitement of "delirium tremens" one or two drachms are necessary.

On the other hand I have seen cases of uric arthritis in which chloral hydrate in high doses produced great excitement without giving sleep: after a full course of alkalies the effect became very different, ordinary doses of chloral producing sleep without excitement. This is in accordance with the general law, which is now well established and tried. I have often had occasion to insist that the best effects of chloral are developed only in a normally alkaline state of the blood; that its effects are heightened when the blood is excessively alkaline, and are counteracted by the opposite chemical conditions.

It has happened to me more than once that my professional colleagues have brought to my notice cases in which chloral hydrate has produced considerable nervous excitement; the state of excitation combating and, in some cases, overcoming the hypnotic effect. In investigating them I found that the chloral employed was of the impure kind of which I have spoken. On opening the cork irritating fumes arose; it was acid, and contained certainly a good deal of chloral, but with it other compounds which give rise by their decomposition to acid and irritating substances of complex character, which have a very injurious physiological action.

I do not at all consider that all cases of excitement arising from the administration of chloral are necessarily due to impurity of the chloral; for imperfectly alkaline conditions of the blood may, as I have said, produce such effect, and other causes also. I may mention also a curious effect of pure chloral which I have observed in several cases. It sometimes happens that if a person who has taken chloral takes alcohol at a subsequent repast, the superficial vessels become dilated, and there is great flushing of the face, as though an excessive amount of alcohol had been taken. I cannot explain this vascular dilatation; but in such cases it may be necessary for the patient to discontinue either the alcohol or the chloral.

Dr. Liebreich would, therefore, altogether prohibit the use of chloral, either in solution or otherwise, which is not of the utmost purity. There is no practical means by which the purity of chloral in solutions can be ascertained; and the best authorities state that a very large proportion of the solutions current in medical and pharmaceutical practice are of an impure, untrustworthy character, and therefore liable to produce dangerous results. To produce the best effects of chloral it should not be given on an empty stomach. It is not necessary that a full meal should have been taken, but it is desirable that some light nourishment or a biscuit, or something of the sort, should be eaten before the dose of chloral is administered.

A NEW STIMULANT—PITURY.

BARON VON MUELLER writes to the *Australian Medical Journal* on the origin of the Pitury, a stimulant said to be of marvellous power, and known to be in use by the aborigines of Central Australia. After years of efforts to get a specimen of the plant, he had obtained leaves, but neither flowers nor fruits. He can almost with certainty, after due microscopic examination, pronounce those of the Pitury as derived from his *Duboisia Hopwoodii*, described in 1861 (*Fragn. Phytogr. Austr.*, II., 138). This bush extends from the Darling River and Barcoo to West Australia, through desert scrubs, but is of exceedingly sparse occurrence anywhere. In fixing the

* Abstracted from the *Practitioner*, June.

origin of the Pitury, a wide field for further inquiry is opened up, inasmuch as a second species of *Duboisia* (*D. myoporoides*, R. Br.) extends in forest land from near Sydney to near Cape York, and is traced also to New Caledonia, and lately by him also to New Guinea. In all probability this *D. myoporoides* shares the properties of *D. Hopwoodii*, as he finds that both have the same burning acrid taste. Baron Mueller adds: "Though the first known species is so near to us, we never suspected any such extraordinary properties in it as are now established for the later discovered species. Moreover, the numerous species of the allied genus *Anthocercis*, extending over the greater part of the Australian continent and to Tasmania, should now also be tasted, and further the many likewise cognate *Schwenkeas* of South America should be drawn into the same cyclins of research, nothing whatever of the properties of any of these plants being known. The natives of Central Australia chew the leaves of *Duboisia Hopwoodii*, just as the Peruvians and Chilians masticate the leaves of the coca (*Erythroxylon Coca*), to invigorate themselves during their long foot journeys through the deserts. I am not certain whether the aborigines of all districts in which the Pitury grows are really aware of its stimulating power. Those living near the Barcoo travel many days' journeys to obtain this, to them, precious foliage, which is carried always about by them broken into small fragments and tied up in little bags. It is not improbable that a new and perhaps important medicinal plant is thus gained. The blacks use the *Duboisia* to excite their courage in warfare—a large dose infuriates them."—*Nature*.

THE IMPERIAL GERMAN PATENT LAW.

[We have received the following from Mr. G. F. Redfern, Patent Agent, 4 South Street, Finsbury.]

ON July 1 next the new law for granting patents to cover the whole German Empire will come into operation, and its importance to inventors is so evident as to scarcely need comment, although perhaps it may not be known generally that hitherto no less than 21 separate patents were required to cover the different States which will now be included by an imperial patent.

Under the new law patents will be granted for 15 years, and will be kept in force by the payment of annuities increasing yearly, and all novel inventions will be patentable except such as would be contrary to law or to manners or morals; or those which relate to articles of food, medicine and chemical products, although processes for making these articles can be patented. An invention will not be considered new if at the time of the application for a patent it shall have been described in any of the public journals of the Empire, or if the invention shall have been made use of in Germany. The first applicant will be entitled to a patent. Three months' delay will be allowed for the payment of the annuities, and the invention will have to be worked within three years from the date of the patent, but proof of such working will only be required in case a patent is opposed. Applications for patents are published, and oppositions may be entered. Patents of additions for improvement on former patents will be granted at a small cost. Infringements are to be punished by fine or imprisonment. Existing German patents will remain in force for the terms for which they have been granted, but cannot be prolonged. They may, however, be exchanged for Imperial patents, provided the invention shall on examination prove to have been novel when the original grants were made. The population of the German Empire is 42,762,920 inhabitants.

[The following has been sent to us by Messrs. Wirth & Co., patent agents, Frankfurt-on-the-Maine.]

The new German Imperial Patent Law has just been passed by the Reichstag, and will come into force on July 1, 1877. This new law puts an end to the disorder concerning patents in Germany that has existed until now, at the present time there being twenty-one different States granting patents of their own. These will be all embraced by one law after July 1, and this a good and practicable one, far better than many now in force in other countries.

Pharmaceutical compounds, medicines, alimentary preparations and chemical products cannot be patented under the new law; processes, however, by which these articles are obtained can be patented. An invention must be novel, and not have been introduced to the public, so that no other person can imitate the same. Imported inventions are not patentable, that is to say, only to the real inventor. It is unlawful (for unlicensed persons) to manufacture a patent article, to import the same from another country, or even to use a patented machine, tool, apparatus, or process. Anyone having an invention in use cannot be prevented from continuing to use the same. A patent is procurable for fifteen years; the taxes are 50 marks (2*l.* 10*s.*) for the first year, 50 marks (2*l.* 10*s.*) for the second, 100 marks (5*l.*) for the third, and so on, with an addition of 50 marks each year; thus, a fifteen years' patent costs 5,300 marks (265*l.*). Patents of addition are granted at a cost of 50 marks. The taxes may be paid three months after date. Patent rights may be withdrawn by the Government after three years if the invention has not been carried into operation to a proper extent, or if the inventor has not taken the necessary steps to carry the patent into effect, if he refuses licenses to others who offer a fair royalty and it is advisable for the public good to grant such licenses. Anyone having obtained a patent for improvements on a patented article and wanting a license from the first inventor, is obliged to give the latter a license for his improvements. Foreigners must empower a German citizen to make their applications.

The applications must be examined by the Patent Commissioners and experts appointed for this purpose. An appeal can be made in case of refusal to a special commissioner, and from him to the Imperial Court at Leipsic. In the case of poor inventors the payment of taxes will be postponed for two years or altogether remitted.

Specifications and drawings can be inspected immediately after the application (on account of this patents should be taken in other countries first).

Patents being delivered, a short specification of the same will be published in the *Patent Journal*. Before the lapse of a patent, notice has to be given to the inventor, and a proper time allowed him to fulfil the requirements of the law. Infringements of patent rights are punished with a fine up to 10,000 marks (500*l.*), or imprisonment not exceeding one year. Marking articles as patented which are not so is punished with a fine of 150 marks (7*l.* 10*s.*).

At the publication of the invention, anyone thinking he has a prior right may enter an opposition, which is then examined in the presence of those concerned.

Existing German patents may be transferred to the Empire, but cannot be prolonged. Thus a Bavarian or Alsatian patent (*e.g.*) may be extended to the whole Empire if the invention was really novel before the grant of the first patent; but the law will not prevent any person who has legally adopted such patents in other parts of the Empire from continuing their employment.

Scientific Notes from Foreign Sources.

TANNIN IN WATER ANALYSIS.*

HERMANN KÄMMERER calls, or rather recalls, the attention of analysts to the value of tannin as a re-agent for the detection of organic impurities (especially those of animal origin) in water. After adverting to the unsatisfactory results obtained from the processes to which the residue after evaporation has been sometimes subjected, he points out that a larger proportion of nitrogenised animal principles—and those of a kind specially liable to putrefaction, and hence likely to prove eminently productive of disease, as albumin, &c.—is precipitated by tannin. He points out that the presence of certain salts will retard, though not prevent, this precipitation; and hence no conclusion can be drawn respecting the condition of the water as to organic impurities until twenty-four hours after the addition of the tannin. He considers that no water which, after this interval, becomes in a marked degree turbid, can be used with safety for drinking purposes. These observations of Kämmerer are fully ratified by Dr. Koller.†

* *Zeitschrift des allg. österr. Apotheker Vereines*, March 20, 1877, p. 147.

† *Pharmaceutische Centralhalle*, March 1, 1877.

DETECTION OF LARD AND SUET IN BUTTER.*

THE butter, to which water has been added, having been first heated for two hours over the water bath, to remove saline and some other constituents, is thus treated:—5 parts of concentrated sulphuric acid are agitated with three of the butter, and a nearly transparent yellow fluid is produced, soon becoming a clear yellowish red; if suet or tallow be present (but not otherwise) this will, in the course of half an hour, acquire a dark reddish-brown tint.

SYRUP OF CHLORAL.†

FOLLER's syrup of chloral, in which the taste of the drug is disguised by syrupus menthae, is that which is now chiefly employed in France. M. Carles, however, believes he has succeeded in preparing a still more agreeable variety by the adoption of the following formula:—

| | |
|---------------------------------|---------|
| Chloral hydrat. | 4 gr. |
| Aq. bullient. | 2 gr. |
| Soda carb. (conc. sol.) | q. s. |
| Ess. menthae | ℥j. |
| Syrup simp. | 94 gr.‡ |
| Chloroform | ℥j. |

The carbonate of soda solution is to be added drop by drop, until complete neutralisation is attained. The proportion of chloral, it will be seen, is very nearly one in twenty-five.

QUANTITATIVE ESTIMATION OF UREA IN BLOOD.‡

EQUAL weights of blood and of crystallised sulphate of soda are boiled together, with constant stirring. Sufficient water is then added to replace the loss of weight which has been caused by evaporation. The whole is then filtered, and a portion of the filtrate, equal in weight to that of the blood originally employed, is taken. This is transferred to an apparatus from which the carbonic acid of the atmosphere has been carefully removed, and is boiled with hydrochloric acid. The resulting fumes are conducted through a closed vessel containing baryta water. A portion of this baryta is converted into carbonate by the carbonic acid resulting from the disintegration of the urea, and it is found that each cubic centimetre of carbonic acid thus evolved represents 0.002683 gramme of urea.

METHOD OF DRYING PLANTS FOR THE HERBARIUM.§

MOST botanical students must have regretted the change of colour which plants undergo on drying. We are here informed that this inconvenience may be obviated by dipping the plants in a warm mixture of 1 part hydrochloric acid and 600 alcohol, shaking them to get rid of superfluous fluid, and then laying them in warm blotting-paper, which ought to be changed at least once daily. By this means, the plants will not only dry quickly, but will also retain their natural colour.

MUSTARD AS A DEODORISER.‖

WE are informed that if powdered mustard is rubbed up with a little water it imparts to the latter powerful deodorising and purifying properties. We regret that the proportions are not given, but since the writer recommends it as a means, not merely of cleansing various utensils, but also of removing the smell of fish and so forth from the hands, we cannot but suspect that his meaning would have been better expressed by altering the place of the adjective, and saying, "rub up a little mustard with water," instead of "rub up mustard with a little water."

USEFUL APPLICATION OF SALICYLIC ACID.¶

DR. H. MÜLLER tells us that he has found this drug extremely valuable as a means of preserving syrups, tinctures, &c., of a perishable character. The method he adopts is as follows: He fills the bottles to the neck with the fluid he wishes to preserve, then pours on the surface of this two or three drops of a 10 per cent. alcoholic solution of salicylic acid, inserts the stopper, and puts the bottle in a safe place. In a short time a thin layer of crystals of salicylic acid is formed on the surface, which acts as an effectual antiseptic, while it can easily be removed when

necessary. As a further precaution, Dr. Müller recommends rubbing the stopper with a drop of the salicylic acid solution. The contents of the bottle must be fresh, or the salicylic acid will not prevent the occurrence of further decomposition. Dr. Müller has adopted this method with success in the cases of inf. senne, syr. rhei, rheados, althæa, &c., and there seems little doubt of its wide applicability. In the same journal, though not by the same writer, occurs a notice to the effect that a solution of .5 part salicylic acid in 300 parts of spirit will be found useful in drying plants for the herbarium.

INFLUENCE OF BOTTLES ON WINE.*

SOME time ago a wealthy merchant found to his great annoyance that some extremely fine wine of his own had gone completely bad, without any apparent reason. He observed on closer investigation that the glass of the bottles in which it was contained had ceased to be transparent. Chemical analysis showed that the alkali in the glass had been acted upon by the wine. This naturally led to an investigation, at Bordeaux, of the difference between the kinds of glass which are fit, and those which are unfit, for the manufacture of wine bottles. The results of the examination showed the following to be the chemical composition of glass suitable for this purpose:—

| | |
|-----------------------------------|------|
| Silicic acid | 58.4 |
| Potash and soda | 11.7 |
| Lime | 18.6 |
| Alumina and oxide of iron | 11.0 |
| Various | .3 |

The glass which had proved injurious was found to contain:—

| | |
|----------------------------|------|
| Silicic acid | 52.4 |
| Potash and soda | 4.4 |
| Lime | 32.1 |
| Alumina and iron | 11.1 |

It is the excess of lime which is chiefly deleterious. The best glass ought not to contain more than 20 per cent., at most, of this ingredient. The wine seems to be variously affected, according to the proportions of the different ingredients of the glass, but in general it becomes thick and tasteless.

Pilocarpin.†

THIS substance, the alkaloid of the celebrated jaborandi, is now largely in request in Germany. At first it was hoped that the alkaloid might possess one only of the two specially characteristic actions of the leaves, viz., diaphoretic and sialogogue. But although this unification of action has not been attained, pilocarpin manifestly acting both on the skin and on the salivary glands, the operation of the drug is so far simplified that none of the "remoter" actions of jaborandi are produced by its alkaloid. It is suggested that pilocarpin may be found valuable as an antidote to the alkaloids of the *Solanaceæ*.

CENOKRIN.‡

MM. LANIVILLE AND ROY have introduced under this name a species of test-paper for the detection of impurities in wine. If dipped in a pure red wine, a strip of this paper turns at first greyish blue, and, on drying, lead colour. If, on the other hand, the wine is adulterated with fuchsine, the test-paper turns carmine; elder berries, mallows, &c., produce a bright green, and so on with many of the usual adulterations. MM. Laniville and Roy profess also to have discovered a method of removing fuchsine from wines adulterated with the same, without in any degree injuring the wine itself.

SUBSTITUTE FOR COD-LIVER OIL.§

DR. MARKENOT has succeeded in purifying the oil extracted from lampreys (which, in its crude form, has been long employed in Russia for industrial purposes), and thereby prepared an oil which he thinks may often be substituted with advantage for *oleum jec. ris aselli*. It is said to be of a not unpleasant taste, to be easily digestible, and to have an analeptic action even superior to its rival. It also contains a larger percentage of iodine. It has somewhat the appearance of salad oil, and is not so thick as cod-liver oil, which many patients will esteem an advantage.

* Pharm. Centralhalle, March 29, 1877.

† Répertoire de Pharmacie, March 10, 1877, p. 130 sqq.

‡ Pharmaceutische Centralhalle, April 19, 1877.

§ Zeitschrift des allg. österr. Apotheker-Vereins, May 1, 1877.

¶ Pharmaceutische Centralhalle, April 12, 1877.

‖ Pharm. Zeitung, May 9, 1877.

* Pharmaceutische Centralhalle, April 19, 1877.

† Pharmaceutisches Hand-Isblatt, May 9, 1877.

‡ Pharmaceutisches Hand-Isblatt, May 9, 1877.

§ Pharm. Zeitung, May 9, 1877.



For particulars of Advertisements, Subscriptions, &c., please refer to the first page of Literary matter. An Index to the Advertisements contained in this issue will be found in the front portion of the Journal.

OFFICE—Colonial Buildings, 44a Cannon Street, London.

RENDALL'S THEOBROMINE, OR CONCENTRATED COCOA,

BEING a first-class article, and nicely got up, commands a good sale by all Chemists who bring it under the notice of their customers.

In 1s., 2s., 3s. 9d., and 7s. 6d. tins, through the Wholesale Houses, or direct from the Proprietor,

J. M. RENDALL,
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In consequence of Spurious Imitations of LEA & PERRINS' SAUCE, which are calculated to deceive the Public, LEA & PERRINS have adopted a NEW LABEL, bearing their Signature, thus—

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Which will be placed on every bottle of WORCESTERSHIRE SAUCE after this date, and without which none is genuine. Sold Wholesale by the Proprietors, Worcester; Crosse & Blackwell, London; and Export Oilmen generally. Retail, by dealers in Sauces throughout the World.

November, 1874.

PURE FLOUR OF EGYPTIAN LENTILS, In Bulk or Canisters.

Essex Flour and Grain Co.,
LIVERPOOL ROAD, LONDON, N.

IMPORTANT TO CHEMISTS, SODA WATER MANUFACTURERS, AND OTHERS.

Removal of Lead from Water.

THE SILICATED CARBON FILTER

Entirely removes Lead from Water, thus meeting the complaints that arise from time to time as to the presence of Lead in Aërated Waters.

For confirmation of this assertion, see the opinions of such authorities as Dr. BARTLETT, Professor WANKLYN, and others, at page 74, December, 1876.

REDUCTION IN PRICES.

GENERAL MINERAL WATERS DEPÔT,
27 MARGARET STREET, REGENT STREET,
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PURE CRUSHED LINSEED.

PETER MUMFORD & SON'S PURE CRUSHED LINSEED.
BEST QUALITY. NO OIL EXTRACTED.
Ground so as to retain the natural colour of the seed without being heated.
22s. per cwt. Special Quotations for Larger Quantities.
REPORTS AND ANALYSES ON APPLICATION, POST FREE.
NEWCASTLE GRANARY AND STEAM MILLS, FARRINGDON ROAD, LONDON.

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E. GOULD & SON,

Chemists by Appointment to the London Homœopathic Hospital,
Manufacturing Homœopathic Chemists,
Are desirous of appointing Agents for the Sale of their Preparations in various parts of the United Kingdom and the Colonies.
For Particulars apply at 59 Moorgate Street, E.C.

FOR PARTICULARS OF

THE ANALYSED TEA ASSOCIATION,

And Extracts from "Lancet,"

See Page 47.



Editorial Note

COUNTER PRACTICE.

ALL sections of the trade are arriving at a perception of the fact which we have for so long insisted upon, that either the doctors or the druggists must abandon their pretensions respecting counter-prescribing. The legality of the practice must be definitely settled by other than *ex parte* declarations or ingenious syllogisms, and one side at least is prepared to fight the dispute out to its extreme limit. The question is not now how much or how little prescribing it is expedient that a druggist should undertake, it is not a question of locality, it is not a question of friendly relationship with the medical profession. The action of the medical profession towards us shuts off all consideration of courtesy in this matter. We have to make up our minds as to what is our right: we have to define our claim and struggle for it. The issue must soon come before one of the highest law courts in the land, and we hope the main point will be fairly raised and fairly met. The claim to which we must adhere is that a chemist is fully justified in standing in his own shop and advising all comers on medical matters so long as he makes no pretence whatever of being anything else than a chemist and druggist. The moment he uses any ambiguous title for himself or his establishment it becomes a legal question whether or not he infringes the Medical Act. At

the annual meeting of the Pharmaceutical Society, Mr. Flux, whose authority as a lawyer on such a point is of no small weight, expressed his opinion with a confidence which is unusual with men of his profession. He said, "If you take your stand on 'counter practice' as a necessity of the case for chemists and druggists and for the public convenience I have no moral doubt that the judges will go with you and the Legislature too;" and a little later on he said he was thoroughly convinced that no chemist and druggist who keeps within his own doors has anything to fear. It is a pity that the council did not take their solicitor into their confidence about the Nottingham case. Fortunately, this will be defended without their aid, but no one doubts that the position of the chemists would have been stronger if the council had cordially co-operated in the defence of a vital position. The council considers, we are told, that Mr. Shepperley has carried prescribing too far. As we said just now, we fail to perceive the relevancy of that excuse. The object is not so much to defend Mr. Shepperley as to assert and defend the right which we claim to possess not as chemists but as human beings, of giving advice about a sore throat or any other ailment wherever and whenever we please. We are told that the Medical Defence Association only desires to put down notorious prescribers. We strongly object to leave them to be the judges as to how far we may go, or to accept from their generosity such crumbs as they may please to throw us. The recent Medical Act Amendment Bill, introduced by Dr. Lush, was not intended, we are told by its nominal author, to interfere with the chemists' trade at all; but are we quite sure that no "man in the moon" suggested the sinister clause inflicting a 20*l.* penalty on any person not registered under the Medical Act "who shall practise medicine or surgery for gain?" We do not believe in clauses of that character getting into bills quite by inadvertence. We know that the bill emanated from the Medical Defence Association, and we know, too, that that body may at least be credited with clearly defined intentions. Dr. Lush himself may be all that Mr. Atkins paints him, but if we acquit him of a desire to snatch an unfair advantage for the profession he represents, that acquittal of itself is evidence of a legislative laxity which deserves the severest reprehension. We can hardly imagine a more dangerous Englishman than a member of Parliament who introduces bills the effect of which he has not taken the trouble to consider. By prompt and united action the clause inimical to chemists has been withdrawn from the bill, but the spirit which inserted it lives still, and we may depend upon the attentions of the Medical Defence Association whenever these can be bestowed without too directly attracting the notice of the public. The visit of the deputation of medical men to the Home Secretary, and the evident design of coupling druggists with quacks, is evidence of this. But the old game of displaying the hogey "quack" to frighten Parliament and the public into according a medical monopoly is by this time about played out. The public wants a certain proportion of counter-prescribing, and means to have it, and if the Medical Defence Association sets itself to oppose that public want—so much the worse for the Medical Defence Association.

PHARMACEUTICAL FIGURES.

WE remarked last month that the large decline in the legal, and the large increase in the fiscal, expenditure which the recently-issued pharmaceutical report made manifest, seemed to be a fair indication of the policy of the late Pharmaceutical Council. The annual meeting at Bloomsbury Square last month most unmistakably demanded a freer indulgence in legal treats than can be had for the sum of 185*l.* per annum. The council was disposed to boast of its economy in this respect: the members politely hinted, in reply, that the economy had been attained by something very like neglect of the most

essential duties devolving on the body as the official executors of the Pharmacy Act. The Trade Association, in about half the time, spent 326*l.* in law expenses, and it must be admitted that the latter outlay seems to have been the most productive.

The Pharmaceutical Society's financial statement is worth looking at a little closely in one or two other particulars, if only as a matter of curiosity. We have already pointed out that the society made over 1,100*l.* net profit during 1876—a result attained without any undue economy, except in the particular item on which we have just remarked. Over a thousand pounds was spent during the year on the library, museum, professors' endowments, and sundry items towards the educational department in London: provincial education was made "passing rich" on forty pounds during the same period. Rent and house expenses generally reached nearly 1,400*l.*, salaries over 1,500*l.*, and office expenses, postage, stationery, &c. (quite exclusive of the journal) nearly 600*l.* It is curious to note that "rent, taxes, and insurance" amounted in 1876 to 489*l.* 19*s.*, while in 1875 they were 640*l.* 1*s.* 2*d.* Londoners may be excused for wondering how it happens that such a reduction has been attained. The item of 120*l.* for an assistant secretary for Scotland should have been in the balance-sheet years ago. We call attention to it now to point out the large amount of patient and disinterested work which Mr. Mackay has done for the society these many years. Silver teapots are cheap just now, and some tangible recognition of such labours might have been spared out of the 1,100*l.* We cannot refrain from mentioning another instance of the frugality with which Scottish business is conducted. The fees to examiners represent, we suppose, roughly the work done. They should do, at all events. These amounted in England and Wales to 686*l.*; in Scotland to 136*l.*; so that the English examiners may be said to have done in the gross about 5 times as much work as the Scotch examiners. Now the examiners are provided with a little refreshment during their day's work, and one would expect that the proportion of expenses in this matter, as between England and Scotland, would be also about 5 to 1. The exact figures, however, are:—"England and Wales, 64*l.* 19*s.* 8*d.*, and Scotland, 31*l.* 7*s.* 4*d.*," or more than 19 to 1.

The figures respecting the Benevolent Fund we comment upon elsewhere.

THE PHARMACEUTICAL BENEVOLENT FUND.

IT is a credit to every Pharmaceutical Council that has yet existed that, amid the many subjects demanding attention, it has never failed to keep prominently in view the interests of the Benevolent Fund. The liberality displayed by the society in offering the benefits of that fund to every member of the trade is also well in keeping with the generous manner in which it has always been administered; and it is a very satisfactory result of the labour which has been spent on this work of charity that now twenty-four poor persons each receive thirty pounds a year, while in addition nearly five hundred pounds is annually distributed in sums of five, ten, fifteen, or twenty pounds. All this represents a great amount of distress relieved; it means the rescue of many a fallen comrade from utter despair; and it means a new chance in life for many an innocent orphan. Nothing is further from our wish than to check in the least degree this excellent work, nor do we wish to ignore the evidence of a strong desire which has recently been manifested by the administrators of the fund to extend its benefits. But it does strike us and many others as rather unfortunate that simultaneously with the special effort to increase the number of subscribers should have appeared a statement showing that out of a clear income, after paying the twenty-four annuities and necessary expenses, of 1,095*l.* only 470*l.* was spent in charity. The balance was invested in Consols. Surely this gives an air of unreality to

the eloquent appeals which have been addressed to us lately, and, to our thinking, provides a sufficient answer to the fluent gentlemen at the annual meeting who were "astonished" that any member of the trade should neglect to subscribe. A good many people not necessarily wanting in charity object to swell a fund which, as far as appears, is already more than sufficient, and those who know anything of hoarded charities may well shrink from helping to transmit another to posterity.

We would ask the almoners of this charity to be more free with their money; to clear out of their minds the fantastic desire of having an invested capital of twenty thousand pounds which seems to have taken possession of some of them, and to spend as nearly as possible each year's income within the year. Would it be any very great recklessness if those twenty-four old people were presented with fifty pounds a year instead of thirty? Such a bonus to them would not enable them to live in luxury, but it would add much to the comfort of their declining years, and it would not exhaust the superfluous income of the fund as it now stands, while we have the fullest confidence that no means of increasing that income could be discovered so effectual as the evidence that the money was really wanted, and was well spent.

It has been announced, since the above was written, that it has been resolved to add six more annuities to the Beuevolent Fund. Even with that increase the Fund could bear the additional expense we have suggested.

ETHER TIPLING.

ON what possible psychological grounds can the almost universal passion for stimulants be accounted for? One of the latest developments of the vice (a rumour of which has reached the ears of most of us) is ether drinking in Ireland. For more than thirty years has this vice been known, as we are informed by an article by Mr. H. N. Draper in a recent issue of the *Medical Press*. People are ashamed of it; publicans boast that they do not sell it; it is drunk in secret, and even those most addicted to it condemn it strongly in public. Its effects are most disastrous. The details of one case, where its effects were fatal, in the words of the informant, are as follows:—

He drank a big draught of it, and he went out of the house and didn't cross the crib-stone till he dropped and never spoke. Q. Had he been drinking much of it lately? A. Oh! aye, he wuz dictated (addicted) to the ayther, and jist went on till it killed him.

In another case a young man is supposed to have lost his sight almost solely from its use.

— says she knows of people that have "gone out of their minds from dhinkin' ayther." This is confirmed by a statement of a man met with going up Slieve Gallion Mountain, in the same district (Draperstown), that "the ayther is puttin' the people astray an destroyin' their heads" (and yet he was carrying a bottle of it up with him).

Another piece of information is—

I know of a man that wuz always dhinkin' it, an wan day after a dose of it he went to light his pipe, an the fire cot his breath, an he tuk fire inside, an only fur a man that wuz carryin' a jug of wather wud some whisky to the kitchen, he'd a' lost his life. He jist held him down at wanst as quick as he could, an poured down the wather down his throat. Q. Well, did he recover? A. Oh! aye, he recovered, but the inside of him wuz on fire, an only fur the wather he'd a' burned away.

What a horrible incident! Which of the novelists will be the first to use it?

The dose of the intoxicant is about half a wineglassful followed by a glass of water. It is usually obtained from petty grocers, who get it from the local druggists. Only the very lowest of the publicans keep it. This habit seriously affects the Revenue and the interests of the Insurance Companies. Would one of the latter pay the insurance on a man

who perished from internal combustion? And how much less whisky is drunk on account of the ether?

The priests are working against this dreadful habit. One of them "cursed" the ether, and in his neighbourhood its use is dying out.

Another persuaded the sellers to give up to him all their stocks at little more than cost price, and the habit, which reached its climax about 1869, seems now to be on the decline. Whether this is the ebb before the flood we do not yet know.

THE SALE OF METHYLATED SPIRIT.

Mr. H. GOODALL (writing to the *Pharmaceutical Journal*) refers to the case of a dealer who, some few months ago, was fined for selling methylated spirit, which was afterwards used as a beverage. Wishing to know what retailers were liable to, Mr. Goodall wrote to the Inland Revenue Office, and, after repeated applications, obtained an answer to his questions. The Board of Inland Revenue, finding itself in a dilemma, boldly resolved to cut its way through, regardless of the claims of reason and justice.

The questions asked were:—

1. Can methylated spirit be sold for any purpose apart from manufactures, or be used for domestic purposes?

2. Is a retail dealer required to ascertain what purpose methylated spirit is required for before selling?

The answer ran thus:—

"Inland Revenue Office,

"Somerset House, London.

"January 20, 1877.

"Sir,—In reply to your communication, dated the 12th instant, I am directed by the Commissioners of Inland Revenue to inform you that,

"1. You can legally sell methylated spirit to be used for burning in lamps and for purposes not connected with manufacture.

"2. The law does not expressly bind you to know what purpose it is for before selling it, but if you sell methylated spirit and if it is afterwards used as a beverage you are thereby rendered liable to the penalty of 100*l.*, imposed by the Act 24 and 25 Vict., cap. 91, sec. 6, upon any person who 'shall sell any such spirit as and for a beverage.'

"WILLIAM ROSSETTI,

"Assistant Secretary."

THE ROYAL SOCIETY.

THE following gentlemen were, on June 7, elected Fellows of the Royal Society:—Professor James Dewar, Jacksonian Professor of Natural Philosophy at Cambridge, proposed for election in consideration of his experimental work; Sir Joseph Payrer, K.C.S.I., Hon. Physician to the Queen, President of the Indian Medical Board, late President of the Asiatic Society of Bengal; Rev. N. M. Ferrers, Fellow and Tutor of Gonville and Caius College, Cambridge, Senior Wrangler in 1851, distinguished for his mathematical works and papers; Thomas Richard Fraser, M.D., Examiner in *Materia Medica* in the University of Edinburgh, distinguished for his researches on the physiological action of drugs; Brian Haughton Hodgson, Resident Minister at Nepal, distinguished by his writings on the Buddhistic literature of Nepal and Thibet; John Wesley Judd, Professor of Geology at the Royal School of Mines, distinguished by his researches and writings on the Jurassic, Neocomian, and Wealden formations, and his papers on volcanoes; W. Carmichael McIntosh, M.D. (Edinburgh), distinguished, by his researches on the mollusca; Robert McLachlan, distinguished as an entomologist; John William Mallet, distinguished as a chemical and physical experimenter, the first who succeeded in fusing into a solid mass metallic arsenic under pressure of its own vapour; Henry B. Medlicott, Superintendent of the Geological Survey of India; Henry Nottidge Moseley, Fellow of Exeter College, Radcliffe Travelling Fellow, and one of the civilian staff of Her Majesty's ship *Challenger*; Osborne

Reynolds, Professor of Engineering, Owens College, Manchester; William Roberts, M.D., Physician to the Manchester Infirmary, distinguished for his researches in histology, physiology, and pathological chemistry; Professor James Thomson, Professor of Civil Engineering and Applied Mechanics, Glasgow; Dr. William Turner, Professor of Anatomy, University of Edinburgh. The arrangements connected with the election of new Fellows into the society are these:—The recommendation of candidates must be sent in not later than the first Thursday in March of each year. In the first week of April a printed list of all the candidates is sent to each Fellow, the list giving a reprint of each recommendation, with the names of proposers. On the first Thursday in May the council select 15 names, which are "recommended" for election. On the first Thursday in June the election by the votes of the Fellows is made. The 15 gentlemen elected were those recommended by the council.

MEDICAL AND PHARMACEUTICAL STATISTICS.

On the last day of the session of the General Medical Council some important statistics were presented by Dr. Farr, from which we learn the proportion of physicians and surgeons in the United Kingdom is gradually on the decline. The average number of persons to one medical man in the United Kingdom was: 1851, 1,386; 1861, 1,554; 1871, 1,672. The proportion of physicians, surgeons, assistants, and medical students aged 20 years and upwards to 10,000 of population in England and Wales returned at the last four Censuses was: 1841, 9.9; 1851, 9.7; 1861, 8.3; 1871, 7.8. The number of chemists and druggists aged 20 years and upwards at the same periods was: 7,816, 10,846, 12,638, 15,540. Proportion of the above to 10,000 of population, 4.9, 6.0, 6.3, 6.8.



AND

Literary Notes.

Taking Cold the Cause of Half our Diseases. By John Hayward, M.D. London: Gould & Son.

This is the sixth edition of the work, a fact which speaks to its value. A chapter has been added and typographical corrections made.

The Liver and its Diseases, both Functional and Organic. By William Morgan, M.D. London: The Homœopathic Publishing Company.

A CAREFULLY written hook of over two hundred pages, in which the various disorders of the liver are treated historically, anatomically, chemically, and under other heads. One feature of the hook is that a short account of the allopathic treatment is given with each disease.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By Ira Remsen, M.D., Ph.D., Professor of Chemistry in the John Hopkins University, U.S. London: Baillière, Tindall & Cox.

THE scope of this work is limited to theoretical considerations, which receive a fuller treatment than is usually the case in manuals. It is divided into two parts:—1. General discussion of atoms and molecules. 2. Constitution or structure of chemical compounds. The work is interestingly and clearly written, and treats of all the more reliable theories and considerations of modern chemistry. It confesses to many imperfections, due to the incompleteness of our knowledge. It will be useful in collecting together many ideas hitherto scattered over a variety of sources, and we can honestly recommend it to anyone wishing to get a general idea of this special branch of chemistry.

A Guide to Therapeutics. By Robt. Farquharson, M.D. (Edin.). London: Smith, Elder & Co.

AFTER some twenty pages of introductory matter, the author arranges the various drugs under provisional classes, as purgatives, emetics, &c., and then goes on to treat separately of the specific virtues and special uses of each drug. Each page is divided into two columns, the left hand one treating of the physiological action, the right of the therapeutical use. Botanical and pharmaceutical details are omitted, to the manifest improvement of the book, which, though mainly intended for students, will undoubtedly prove very useful to all engaged in prescribing.

Aids to Chemistry, specially designed for students preparing for examination. Part I. Inorganic. Oxygen to the Metals inclusive. By C. E. Armand Semple, B.A., &c. London, &c.: Baillière, Tindall & Cox.

A BOX of sardines, "Aids to Zoology;" a pound of tea, "Aids to Botany;" and this book of "facts," "Aids to Chemistry." Well compressed and compactly arranged; but dead, and not quite in their natural form.

To get an idea of the shape of a tea leaf we must soften it, and carefully flatten it out, and even then we shall not get such a correct idea of it as we should from a living branch. So with many of the statements in this book. We must soften them in a good supply of extra information, flatten them out with careful explanation; but, even then, how much better it would be to get them fresh from the test tube, living and impressive.

Numerous mis-, because partial, statements might be expected in a book which disposes of the chemistry of thirteen elements in sixty-one pages less than half the size of those of this journal. But in a book intended specially for students we certainly ought to have consistency and typographical accuracy. A student with a paper and pencil and an inquiring turn of mind would get three different lengths for the metre from statements made on pages 15 and 58. And in the list of errata (which ought to be much extended) we are actually told to strike out in one place the correct formula (H_3AsO_4), and insert the false one (H_3AsO_3). Turning to the page to which we are referred we find there, not H_3AsO_4 , but H_3AsO_3 —a double blunder!

We suppose public opinion is too strong to allow the author to translate his title into plain English, and to call his book "Cram." Cram it is, and as fit a preparation for an examination as the training of a Strasburg goose destined for "Pâté de foie gras" would be for an Oxford oarsman. When will people learn that examinations are not intended to make them diseased and puny wretches, but to help them to become stronger and better, because wiser, men and women?

This book is reprinted from the *Students' Journal*, and though it is not in the usual style of that periodical, we cannot too strongly express our feeling of the wrongfulness of its editor in laying such sawdusty mental provender before his hard-worked readers. He at least ought to know what is nourishing and what hurtful.

Were there any reference here to more advanced books, or were the advantages of experiment insisted on in any single place, the book might be more excusable, but as the matter stands it is a blind leader of the blind, which, unfortunately, will not get much hurt when it does tumble into the ditch.

The History, Products, and Processes of the Alkali Trade including the most recent improvements. By C. F. Kingzett. London: Longmans, Green & Co. 1877.

THE alkali trade is one of the largest and most important sources of our national wealth. At present the products of the trade are:—Iron, copper, silver, gold, sulphuric and hydrochloric acids, bleaching powder, potassium chlorate, calcium chloride, sodium sulphate, caustic soda, sodium carbonate and bicarbonate, sulphur, copper sulphate, sodium hyposulphite, sodium phosphate, and magnesium sulphate. The waste products, consisting mainly of chlorine, sulphur, and lime in one form or other, are every year diminishing in quantity through the improvements effected by the application of science. Ten years ago the annual value of the products of the trade in the Lancashire and Tyno districts alone amounted to nearly four millions sterling. An account of such an important industry cannot fail to excite the interest of those engaged in the many branches of applied chemistry.

After a brief notice of the relations of trade to science the author proceeds to the history of sulphuric acid. It is interesting to notice the influence which legislation and various

political events have had on the production of this article. And one cannot fail to observe the close analogy that exists between the process of evolution that has brought the trade to its present condition and the methods by which nature has slowly evolved her most highly developed organisms. The manufacture of sulphuric acid is a subject of the greatest interest to the scientific chemist, as well as to the manufacturer: the author has, however, treated it in a rather superficial manner, better calculated to interest the general reader.

The treatment of burnt pyrites is the subject of the next chapter. It appears from the British Association report of 1870 that Mr. Phillips, of the Widnes Metal Works, obtains from each ton of ore worked $\frac{1}{2}$ oz. of silver, and 1.5 grain of gold, at a cost of 8*d.* This is accomplished by Claudet's process, which is based on the precipitation of the precious metals as iodides, the copper being subsequently removed and extracted by Henderson's process. Other methods which have been applied with success are referred to, as well as processes for the extraction of the residual sulphur and the zinc. The author then treats of the manufacture of the various alkaline salts, and of hydrochloric acid. Hargreaves' ingenious process for the direct production of sodium sulphate from the chloride by the action of sulphuric anhydride and super-heated steam is referred to in detail, and the description is illustrated by drawings of the plant employed. There can be little doubt that this method is destined to exercise an important influence on the trade. The manufacture of sodium carbonate and bicarbonate is the subject of the next chapter. The original method of Le Blanc for the preparation of black ash by igniting together sodium sulphate, calcium carbonate and carbon, has not undergone any material alterations as regards the chemistry of the process, but the working of the method in its mechanical details has been repeatedly improved. Amongst the most important of these improvements is Messrs. Daglish & Co.'s application of Siemens's gas arrangement to a revolving furnace. At first the production of two dense balls appeared to be a serious obstacle to the use of this method, but Mactear has shown that this objection is easily overcome. The introduction of these improvements has not only effected a great saving of labour: it has also greatly improved the quality of the product. In a suggestive chapter on alkali waste the author reviews the numerous difficulties that have been encountered in turning it to account, and describes the more successful methods that have been devised to effect this object. Weldon's process, depending on the use of ferric compounds for the recovery of the sulphur, has not led to the results that were anticipated: Mactear's method, however, has been more successful, but the small profit that is realised has been a serious objection to all attempted improvements in this direction. Space does not permit us to refer at length to the chapter on the preparation of soda from cryolite, the ammonia process, and the methods of Lunge, Bachet, Davis, &c. There is also an interesting, but very short, chapter on soap, and the concluding chapters refer mainly to the manufacture of chlorine and the chlorine compound employed in the bleaching industry. Weldon's excellent process is described, and plans are given of his manganese regeneration plant. Deacon's method is also described, and those of Hargreaves and Robinson and others. It is to Weldon's method, however, that we must trust for the present for most of our chlorine, as there is little prospect of its being superseded.

It is of course impossible that such a vast subject could be fully treated in a volume of a little more than two hundred pages. Notwithstanding the limited extent of the work, however, it cannot fail to interest the general reader. Viewing it from a chemical standpoint, there is a want of thoroughness and a deficiency of scientific detail which greatly detract from the value of the work for the purposes of the scientific or technical chemist. To these defects we must add the almost total omission of references and the absence of an index. The importance of the subject demands for it a more scientific and elaborate treatment, and we hope a second edition will soon be called for, and that the author will avail himself of the opportunity to enlarge and improve a work for which there is such an excellent opening.

Rapport sur les Médicaments Nouveaux par une Commission composée de MM. Baudrimont, Gobley, Marais, Schaeuffele, et A. Petit, Rapporteur. Paris: G. Masson. 1877.

Thus, as the title indicates, is a report by a commission appointed by the Société de Pharmacie of Paris on the new remedies of the last ten years. The reporter regrets that the

Académie de Médecine would not put forth officially what from the Société de Pharmacie can only come officiously. It is a work having the same relation to the Codex that the Appendix has to the Pharmacopœia, but it has not the official character of the Appendix, and covers a larger space of time. We notice in it formulae for the preparation of crystallised aconitine and digitaline, of apomorphine, caffeine, eserine or physostigmine, pilocarpine, narcine, picrotoxine, besides numerous preparations of the alkaloids. As the chemical and materia medica portions of the work are quite equal to the pharmaceutical, we must see that the work in no way belies the promise of its authorship.

Butter: its Analysis and Adulterations, specially Treating of the Detection and Determination of Foreign Fats. By Otto Hehner, F.C.S., and Arthur Angell, F.R.M.S. London: J. & A. Churchill. 1877.

THE method for the analysis of butter proposed by Messrs. Hehner & Angell, based upon the determination of the fatty acids by saponification and the subsequent decomposition of the soap, has been so widely approved of, and so extensively adopted by chemists, that we gladly welcome the second edition of this book. It contains a large amount of new matter, embracing an extensive notice of objections that have been raised to the working of the method and the precautions that must be observed in order to secure accurate and trustworthy results. The authors may fairly claim to have placed the analysis of butter on a thoroughly scientific basis. This little volume is of course indispensable to the analytical chemist.

THE AMERICAN drug journal, *New Remedies*, has resolved to start a "Corner for Students" on a system similar to our own.

DR. LARDNER's treatise on heat—one section of Dr. Lardner's well-known "Handbook of Natural Philosophy"—is now republished by Messrs. Crosby Leckwood & Co., under the editorship of Benjamin Loewy, F.R.A.S. The retention of Dr. Lardner's name seems little more than complimentary, as we are informed that of the 450 pages of which the volume consists, 320 are entirely new, while the small remnant has also been remodelled and brought into accord with modern terms and views. The method of the work is first to treat of the effects of heat on bodies, in which section the expansion of solids, liquids, and gases, liquefaction, vaporification, solidification, and condensation, as well as hygrometry and chemical results, are discussed. The consideration of the propagation of heat follows, and this brings us to the modern discoveries and applications of its power. Thirdly, combustion and animal heat are tested. The book is well illustrated and lucidly written. Experiments are given in abundance, and tables are freely inserted.

THE CHEMICAL SOCIETY.

Thursday, May 17, 1877.

W. CROOKES, F.R.S., Vice-President, in the chair.

The following papers were read:—

"On a Slight Modification of Hofmann's Vapour-Density Apparatus," by M. M. P. Muir and S. Suguira. The authors propose to omit the india-rubber plate of the original apparatus, and mark off the height of the mercury by a cathetometer and a slip of gummed paper.

"Note on the Fluid contained in a Cavity in Fluorspar," by J. W. Mallet. The cavity was 6 m.m. by 2.5 m.m. by 1 m.m. It contained water and a bubble. On heating, the bubble became less mobile, and the crystals showed signs of incipient splitting.

"Examination of Substances by the Time Method," by J. B. Hannay. The author has determined the loss sustained by various hydrates in equal and successive intervals of time when submitted, in a Liebig's drying tube, to a current of air at various temperatures, and thus obtains evidence of the existence of hitherto unknown hydrates. Magnesium sulphate when treated as above loses 8 per cent. of water in 5 minutes at 100° C.; the loss is then much slower and regular up to 29 per cent., when the rate of loss decreases somewhat suddenly, from the formation of a lower hydrate, which loses water much more slowly.

"On the Dehydration of Hydrates by the Time Method," by W. Ramsay. The author examined the hydrates of alumina, iron, copper, and lead.

"On the Transformation of Aurin into Rosaniline," by R. S.

ale and C. Schorlemmer. By heating sulphuric acid and pure anethol, and gradually adding oxalic acid, pure aurin is formed; by the action of ammonia on aurin, red aurin is produced, which, by the action of alcoholic ammonia at 150° for several days, is converted into rosaniline. The authors consider aurin to be identical with rosolic acid.

"On Certain Bismuth Compounds," Part VI., by M. M. Muir. The author describes the preparation, &c., of hypobismuthous oxide, bismuthous oxychloride and oxybromide, and alpbismuthyl chloride.

"On the Theory of the Luminous and Non-Luminous Flame," by J. Philippon. The author states what he considers to be the causes of the luminosity and non-luminosity of flames.

Thursday, June 7, 1877.

Dr. GLADSTONE in the chair.

The following papers were read:—

"On the Gases Enclosed in Lignite Coal and Mineral Resin from Bovey Neathfield," by J. W. Thomas. Four samples were examined, two of which contained much hydrated oxide of iron in the cleavages. The gases consisted chiefly of carbonic acid, carbonic oxide, nitrogen, and sulphuretted hydrogen. In the case sulphur sublimed off in yellow crystals: organosulphur compounds, mercaptan, sulphide of allyl, &c., were also present in the gases. The lignites resemble Cannel coal more than any other of the true coals as regards the occluded gases, but are less stable, decomposing in vacuo below 200° C., whilst the true coals resist a temperature of 300° C. It seems probable that the iron pyrites of true coal have derived their sulphur from that existing in organic combination in the plants from which coal is produced.

"On Apparatus for Gas Analysis," by Dr. Frankland. The author proposes to substitute for the indiarubber cork, which has several disadvantages, at the bottom of the water cylinder, a cast-iron base, through which the two glass tubes pass, and which is firmly clamped by a wooden clamp; the latter is screwed to the cast-iron base. The most important improvement is, however, the removal of the steel clamps which connect the laboratory and measuring tubes. These are replaced by a glass slip at the top of the measuring tube, into which fits the drawn-out end of the laboratory tube, covered with thin sheet indiarubber. This flexible joint, when wetted and covered with mercury, is quite air-tight.

"On Narectine, Cotarnine, and Hydrocotarnine," Part V., by Dr. Wright. The preparation of bromhydrocotarnine hydrobromide, bromocotarnine hydrobromide, and tribromhydrocotarnine hydrobromide is described. The second of these bodies, when heated to 200° , splits into a new base, tarconine, and a large amount of an indigo-blue substance. The latter body is very soluble, but dissolves in strong sulphuric acid, forming a magnificent intense purplish solution. Bromocotarnine crystallises in fine scarlet crystals. Noropianic acid and other substances were also prepared, and their properties examined.

"On Otto of Limes," by C. H. Piesse and Dr. Wright. A terpene-like body, boiling at 176° C., was obtained, which yielded but little cymene. The residue in the retort, after standing two or three months, formed a quantity of crystals. These crystals were investigated and their composition determined.

"On Primary Normal Neptyl Alcohol and some of its derivatives," by C. F. Cross. Pure anethol was prepared with a specific gravity of 0.823 at 16° C. Pure neptyl alcohol, colourless, has an agreeable odour; specific gravity at 0° , 0.833; boils at 175° . Neptyl chloride, bromide, iodide, acetate, and anethanilate were prepared and examined; their boiling points closely agree with those calculated by Schorlemmer.

"On the Transformation of Aurin into Rosaniline," by Messrs. Hale and Schorlemmer. The authors find the spectra of the hydrochlorides of their new base and rosaniline quite identical: they have also prepared from their base Hofmann's violet, aniline blue and aniline green.

The society adjourned till June 21, when the following papers will be read:—

"On Diamyl," by H. Grimshaw.

"On Dinaphthyls," by Watson Smith.

"On Certain Reactions between the Oxalates and Carbonates of the Alkalies and Alkaline Earths," by Watson Smith.

"Note on Thallous Platinocyanide," by R. J. Friswell and J. Greenaway.

"On Crystallised Barium Silicate," by C. W. Prevost.

"Note on Anethol and its Homologues," by W. H. Perkin.



MOND'S PATENT.

On June 6 was heard, before the Judicial Committee of the Privy Council, a petition from Ludwig Mead, a chemist at Appleton-in-Widnes, Lancaster, and the executors and trustees of the late Mr. Hutchinson, praying for the prolongation of the term of a patent, granted 14 years ago, in respect of an invention of certain improvements in obtaining sulphurous acid from alkali waste. The waste fouls the air and pollutes and poisons any water with which it may come into contact, and is considered highly injurious to health and life. The patent in question utilises the waste and renders it virtually innocuous.

Mr. Aston, Q.C., and Mr. Macroy were counsel for the petitioner; Mr. Gorst, Q.C., and Mr. Charles Bowen for the Crown.

In the result, their Lordships dismissed the petition.

NUX VOMICA MIXED WITH JALAP.

On April 27 a man named Richard Gillott, having two valuable dogs, and wishing to administer to them a purgative, went and purchased of Mr. J. H. D. Jenkinson, chemist, of Sheffield, a pennyworth of jalap, and having administered this to the dogs they died twenty minutes afterwards. Thereupon he went to Mr. Allen, the borough analyst, who suggested that the man should purchase another pennyworth of the jalap and bring it for analysis. When analysed it turned out to be nux vomica, a very deadly poison. To eliminate all possibility of suspicion that the powder had been tampered with after leaving the druggist's hands, the analyst, Mr. A. H. Allen, requested one of the inspectors to purchase a further quantity of the jalap, and to bring it at once for analysis. This latter sample was found to contain nux vomica, like the first. The case was heard at the Sheffield Town Hall on May 18, the Town Clerk prosecuting, and Mr. Barker appearing for the defendant. It was admitted by the prosecution that nux vomica and jalap are very similar in appearance and price, and that there was no conceivable motive for the mixture, and in defence Mr. Barker said he could not for a moment submit that his client was not liable to some penalty, but the jalap had been sold at a branch shop, and the original drug had been bought fourteen months ago, and had been sold since without bad effect. He had no nux vomica in the branch shop, and how it had been put in the jalap at all he could not tell. The only conclusion was that it had been intentionally mixed by some one, as his client could not make any possible profit by doing so. This was not a case of fraudulent dealing, and there could be no suggestion that it was a case of that kind. His client, too, had already an action against him for the loss of the dogs, 20% being claimed for one and 10% for the other, so that he would be pretty well punished.

The magistrates inflicted a fine of 2% and costs, Mr. Webster remarking that chemists should not have branch shops unless they attended to them themselves.

It is stated that fully three-fourths of the sample was nux vomica.

On May 19 the following letter from Mr. Jenkinson, the defendant, appeared in the *Sheffield Daily Telegraph*:—

"TO THE EDITOR.

"Sir,—In justice to my business reputation, I trust you will allow me an explanation in this matter.

"Mr. Barker, who appeared on my behalf, was furnished with the same explanation, but was unable to give it, on account of the magistrates abruptly cutting the case short without hearing him out.

"First. That no nux vomica was ever kept in stock at the branch shop.

"Second. That we have sold in the ordinary course of business jalap from the same stock bottle, without any addition to it by us, that the samples obtained by the inspector and then

owner of the poisoned dogs were sold from for fourteen months previously without any complaint being made, or heard of, which from its deadly effect upon the dogs we must have done had it contained the poison during that time.

"Third. That a man can be produced who purchased some of the same stock two or three months ago, who took some himself and administered some to his dogs (of the same kind as were poisoned), with a proper medicinal and no injurious effect.

"Fourth. That the two powders are so near alike that when mixed together as those were the admixture could not be detected without very close observation.

"Fifth. That I purchase only the finest and best medicinal drugs, and them only from first-class houses. And

"Sixth. That in my opinion the poisonous powder has been put into the bottle by some person other than myself or assistants.

"Of these explanations I could give clear and distinct proof were it required to do so."

"I am, sir, yours obediently,

"62 Duke Street, May 18, 1877. J. H. D. JENKINSON."

ROBBERY AT GOSNELL & CO.'S.

AMBROSE ELLIOTT, a clerk in the employ of Messrs. Gosnell & Co., earning 30s. to 35s. per week, was charged at the Mansion House on June 6 with stealing a banker's check. The defendant had systematically embezzled large sums of money, and various unsatisfactory appearances in the books led to his being charged and searched, when two checks were found upon him, one to the value of 51*l.* 11*s.* 4*d.* He was sentenced to six months' imprisonment with hard labour.

REFUSING TO SELL GOODS.—PROSECUTION UNDER THE SALE OF FOOD AND DRUGS ACT.

JOHN USHER, druggist, Castle Street, Belfast, was charged on May 30, at the Belfast Police Court, with having, on the 18th ult., refused to sell, for the purpose of analysis, a certain drug, to wit: sulphate of quinine, same being on sale by retail on the premises.

W. J. Anderson, sub-sanitary officer, stated that when he went to defendant's shop he asked for a drachm of sulphate of quinine. It was exposed for sale on the premises. When the defendant had labelled the article, witness threw down a half sovereign on the counter. Defendant said he had not change, and witness went out next door, got the change, and tendered the defendant half a crown. Witness then told him that he wanted it for analysis, whereupon the defendant snatched the sulphate of quinine and threw back the money. Defendant said, "You are done now," and witness told him he was liable to be summoned for refusing to sell the article.

In reply to Mr. O'Donnell the witness said: I did not suspect that it was adulterated, but I wanted to try. He took the quinine out of a bottle on a shelf, weighed it in my presence, made it up in a parcel, labelled it, and then took it back.

Cross-examined by Mr. Sheals, he said: When I went into the shop I had my uniform on me, with the letters "S. S. O." (sub-sanitary officer) on both sides of the collar, but I did not tell defendant I was a sub-sanitary officer.

It was urged in defence that when this man went to defendant's premises he did not announce himself as a sub-sanitary officer, and did not ask for the drug for the purpose of analysis.

The defendant stated that when the complainant came into the shop he had the collar of his coat up, so that the letters "S. S. O." on the collar could not be seen. He had the smell of spirits on him, and that was the reason witness pulled the quinine back from him. Witness thought the complainant would have tampered with it before bringing it to Dr. Hodges. If complainant had come in a proper way and told him it was for analysis, he would not have hesitated to give it to him. Witness was under the impression that the complainant was not a person authorised to get a drug for the purpose stated. The drug was purchased from Messrs. Evans, Sons & Co., of Liverpool. Witness got no guarantee of the purity of that or any of the other drugs purchased.

The complainant said that he was perfectly sober when he went to defendant's shop. It was a wet day, and he had his coat collar turned up.

The magistrate was of opinion that a distinct refusal had been proved. Having regard to the 4th section of the Act, the mixer of drugs was dealt with very severely—the penalty being 50*l.* The sale of adulterated drugs was one of the worst offences a man could commit. Although this case was the first that had been brought under the Act, he thought it was a bad case, and he would inflict the full penalty—10*l.*—for refusing to sell.

THE NON-INGENUITY OF TRADERS.

THE WAHLDEN AERATED WATERS COMPANY applied to the Master of the Rolls on June 8 for a direction to the Registrar of Trade Marks to register in their name a device of a cock over a circle, as their trade-mark for mineral waters. The Registrar had declined to register the device in question, on the ground that it nearly resembled a Mr. Cockcroft's registered trade-mark—a cock in a circle—although Mr. Cockcroft himself did not consider it an infringement of his rights, and had given written permission for it to be registered.

The Solicitor-General, for the Registrar, stated that there was also another registered device of a cock inside a circle belonging to a Mr. Thompson, of Bishop Auckland.

The Master of the Rolls said that he had been much struck by the want of originality shown by the people who came to register trade-marks. Two cocks were on the register already as trade-marks for mineral waters, and now nothing would serve the applicants but to register a third cock instead of selecting some other equally inappropriate device. However, if they could satisfy the Registrar that Mr. Thompson had no objection to the registering of their trade-mark they might register it, but not otherwise. There would then be three cocks on the register as trade-marks for mineral waters, and no more could be registered for that article, as the Lord Chancellor was of opinion that the number of times which a new device or emblem might be registered as a trade-mark for articles of the same class ought, for the sake of distinctiveness, in no case to exceed three.

VERMIN KILLER MUST BE ENTERED IN THE POISON BOOK.

AT GUISBOROUGH Petty Session on Tuesday, May 29, Mr. P. B. Ayton, a chemist and druggist, in business at Lingdale, was summoned for having neglected to enter in a certain book, as required by Act of Parliament for the purpose, the sale of a packet of poison. The defendant pleaded that he was in London at the time, and that the mistake was made by his assistant.

It was stated by Superintendent Prest that the poison—a packet of Battle's Vermin Killer—was sold to a young woman named Mary Ann Lawrence, who, whilst in a low way, swallowed a considerable dose of it, and poisoned herself.

The defendant said there was no evidence that the young woman poisoned herself, but Admiral Chaloner remarked that even if that were the case it did not alter the fact that the poison was sold and no entry had been made of the sale. It was a serious offence, and the Bench felt it their duty to inflict the full penalty of 5*l.* and costs.—*Northern Echo.*

LAMPLOUGH'S SALINE.

THE case of the Attorney-General v. Lamplough, which was reported last month, came before the Exchequer Court on the 11th inst. The Lord Chief Baron and Barons Cleasby and Huddleston were the judges. The question in dispute is whether Lamplough's pyretic saline is subject to Medicines Stamp Duty, and the decision of that point may affect other similar compounds.

The Solicitor-General (Sir H. S. Giffard, Q.C.) and Mr. Dicey argued on behalf of the Crown; Mr. Herschell, Q.C., and Mr. E. B. Cooper argued for the defendant.

The argument of the Crown is that this compound is taxable because it is recommended to cure various ailments of the human body, such as yellow and jaundice, scarlet and typhoid fevers, measles, heartburn, and epidemic small-pox. Further that it is sold by a chemist or chemists, and not by the class contemplated by the Act, which exempts from the licence to sell mineral waters such persons as fruiterers, confectioners, pastry cooks, victuallers, &c. The contention of the defendant is that this is a beverage or mineral water, and being impregnated with soda or with carbonic acid gas it is within the relief of sec. 20 of the Act of William IV., which was passed in 1833. Every mineral water was more or less a medicine, such as Vichy,

Apollinaris. Some of them, such as Schweppe's lemonade and potash waters, were strongly recommended for gout and rheumatism; but no attempt to recover stamp duties had been made against them. The only mineral waters not known as medicines were lemonade and ginger beer. The mere addition of chlorate of potash, which the Solicitor-General asserted had a medicinal function alone, made no difference in the result produced.

At the conclusion of the arguments, the Lord Chief Baron said the Court would consider the case, and deliver its judgment at an early day.

THE PROMOTION OF SCIENCE.

In the Court of Exchequer, on the 12th instant, before Baron Pollock and a special jury, an action was brought by a Mr. W. J. Cooper against Dr. B. H. Paul to recover damages for an alleged malicious arrest of the plaintiff by the defendant at Glasgow during the meeting of the British Association in that city in September, 1876.

Mr. Day, Q.C., and Mr. Anderson were counsel for the plaintiff; Mr. McIntyre, Q.C., and Mr. A. Charles, Q.C., for the defendant.

The plaintiff was an analytical chemist, assisting Professor Wanklyn in London, and was indebted to the defendant, Dr. Paul, also an analytical chemist, for money lent, amounting to 163*l.*, as the defendant alleged, and to 46*l.* only according to the plaintiff. Both the plaintiff and defendant went to Glasgow from London to attend the meetings of the British Association, and on the morning of September 12, when the plaintiff was about to read a paper in the Chemical Section, he was arrested upon what is termed a warrant *de meditatione fuga*, which had been obtained by the defendant in respect of the debt in question. The plaintiff was taken before the Sheriff, and after an investigation was discharged. This action was now brought on the ground that the defendant had obtained the warrant by false and malicious statements to the effect that the plaintiff was about to leave Scotland to defraud the defendant of his debt.

In answer to the learned Judge, the jury found that the defendant had acted maliciously, and without reasonable and probable cause, and assessed the damages at 100*l.*



THE PHARMACEUTICAL SOCIETY AND THE CHEMISTS' AND DRUGGISTS' TRADE ASSOCIATION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Referring to my remarks at the annual meeting of the Trade Association, the editor of the *Pharmaceutical Journal*, in the issue of May 19, professes to be amused with the supposed fact that I subscribed for only one year to the society in Bloomsbury Square. I have since written to him, correcting his error, and pointing out that after subscribing for four years I ceased to do so because I considered I was wasting the hard-earned money in supporting a society that did not represent the interests of the majority of the provincial chemists, nor defend their trade interests when called upon to do so. This letter, of course, was not inserted, but a short editorial note gave the correction desired. That I am not alone in the opinions I hold as to the apathetic action of the Pharmaceutical Council the speeches at the annual meetings and the success that has attended the new Trade Association are sufficient proof, and I need not now adduce any other. Let us hope, however, that the newly-elected council, after the strong expressions that have been uttered, will endeavour to place the old society, of which we ought to be proud, once more in unison with the whole trade, so that it may cease to be, as it has been for twelve years, the representative merely of a few London and provincial pharmacists, who, clothed in purple and fine linen and faring sumptuously every day, have no sympathy with their less fortunate and harder-worked brethren, who live in smaller towns and country districts, and who too frequently have to perform duties but little better than those performed by grocers and light porters.

Leominster: May 30, 1877.

M. J. ELLWOOD.

CHEMISTS' ASSISTANTS' ASSOCIATION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Will you allow me space in your journal for the purpose of eradicating the erroneous impressions prevalent respecting the embryo "Chemists' Assistants' Association," as there seems to be a disposition among chemists in business to regard its formation as inimical to themselves, and as savouring too much of a trades union. As one of the committee of formation I may say that is an entirely wrong estimate of its character, inasmuch as it is, on the contrary, the wish of the promoters to obtain the moral and pecuniary support of all chemists, and the fact ought to be taken into consideration that a number of chemists in business have already subscribed towards the preliminary expenses, and others have given us their best wishes for the success of the association. As regards coercive measures in the matter of early closing, I opine that the interests of chemists and their assistants are too closely allied to render a resort to the deplorable necessity of strikes at all likely, as the principals suffer quite as much as the assistants from long hours. Trusting this letter will do good in correcting a misunderstanding,

St. John's Wood, N.W.:

June 9, 1877.

Yours, &c.,

C. B.



INFUSUM COCÆ.—Coca leaves, 1 pint; boiling water, 100.

QUERY.—What did Io die of? Iodide of potassium.

DU BARRY, of the "Revalenta Arabica," has just opened gorgeous premises in the Rue Castiglione, Paris.

MR. CURTIS, jun., of the Winslow Soothing Syrup firm, is now paying another visit to Europe.

THE IRREPRESSIBLE HELMHOLD has turned up again in his native clime and resumed the *helm*, in his usual *bold*, way of the inestimable Buchu.

SYRUPUS COCÆ.—Coca leaves, 1; boiling water, 10. Infuse 24 hours; express, filter, and add 17½ of sugar in each 10 of filtrate.

BAY WATER OR BAY RUM—which dominates in this precious scalp-refreshing liquid? This is a question which our American Cousins had occasion to put to themselves years ago, and which is fast becoming a pertinent one in Old England.

A **DEALER** named Corker was charged with selling milk containing 15 per cent. of water. The defence was that he "turned his cows out once a-day, and they nearly burst themselves with water." He was fined 30*s.* and costs.

IRISH MORTALITY.—It was an Irish cerouer who, when asked how he accounted for an extraordinary mortality in Limerick, replied sadly, "I cannot tell. There are people dying this year that never died before."

THE BLESSINGS OF COCKROACHES.—Dr. Bogamolow has discovered in cockroaches (*Blatta orientalis*) a crystalline substance which has proved useful in the treatment of dropsy. Cockroaches are a favourite diuretic with the Russians.

SYRUP OF BROMIDE OF POTASSIUM.—Dissolve 1 ounce of bromide in 1 ounce of water, and add 18 ounces of simple syrup. The simple syrup may be replaced by syrup aurant.—*Répertoire de Pharm.*

DO YOU CHEW?—Have any of our tourists in America remarked the precocious schoolboy or girl, wending their way home, deeply absorbed the while in a masticating process of a never-ending kind? The delectable stuff which occupies their juvenile minds and jaws is the exuding gum of a tree called spruce, cheap sticks of which, due to the skill and trading enterprise of some "down east" inventors, are to be purchased in all the drug stores and candy shops of Columbia's happy land.

IODINE CAUSTIC is prepared by dissolving 4 grammes of iodine in 8 grammes of glycerine. It is used in lupus by applying it once every other day, and covering the parts with gutta-percha. This treatment is continued for several weeks.

SULPHURIC ACID is the fashionable liquid for private vengeance in Paris, the most cruel and conspicuous case being that of a woman named Gras, who instigated or allowed one admirer to anoint another with the contents of a vial, thereby destroying the good looks and eyesight of the victim.

A HOME FOR BUGS.—Surgeon-Major G. K. Poole writes to the *British Medical Journal*:—"The best remedy for bugs in hospitals is a bug-trap, made by boring a series of holes in a piece of soft wood with a gimlet, and placing this under the mattress of each cot. The pieces of wood is to be put periodically into a basin of boiling water. This is an Indian hospital plan."

REMEDY FOR HEADACHE.—Jno. E. Lockridge, M.D., in a communication to the *American Practitioner*, strongly recommends the following formula as an infallible remedy for headache:—

| | |
|------------------------------|----------|
| Bromide potassium | 2 ounces |
| Tincture aconite root.. .. . | 1 drachm |
| Distilled water.. .. . | 2 ounces |
| Simple syrup | 2 ounces |

Mix. Dose, a dessertspoonful in some water every three hours until relieved.

MASKING THE TASTE OF QUININE AND OTHER INTENSE BITTERS.—Professor Remington says liquorice is found to be the best means of doing this. It acts by forming a coagulum with the albumen of the saliva, and so, coating the tongue and palate, prevents the bitter from being perceived. One ounce of an elixir (1 part of rad. glycyrrh. to 16 parts of water) is said to mask the taste of 10 to 12 grains of quinine completely, while with from 15 to 20 grains only a slight bitterness is perceived.

ANTIBILIOUS PURGATIVE POWDERS.—The following are suggested as being not disagreeable to the taste, will be borne by delicate stomachs, very certain in their purgative action, and with little if any risk of salivation:—

| | |
|----------------------|----------|
| Calomel | gr. x. |
| Podophyllin | gr. v. |
| Leaf sugar | gr. xxx. |
| Bicarb. soda | gr. xij. |

Triturate and divide in powders No. xx. One powder will usually operate, producing bilious discharges.

CHEMISTS ARE APPARENTLY beginning to wake up to their folly in using violet glass bottles to protect syrups and other articles from the effect of light. Everyone knows that the rays of the violet end of the spectrum are the chemically active ones, and yet druggists for generations have been deliberately exposing their syrups and tinctures to this light to keep them from change. An American chemist has observed that tincture of kino kept in a brown glass bottle did not gelatinise, while that kept in a clear glass bottle close by was entirely changed. The most scientific colour to use for all substances likely to be affected by the violet rays is a deep orange.

EXHIBITION OF SANITARY APPLIANCES.—We understand that advantage is being taken of the forthcoming visit of the British Medical Association to Manchester to promote an exhibition of sanitary appliances. Such an exhibition will undoubtedly be productive of great good. The exhibits will be arranged in classes, comprising:—1. Drainage and disposal of refuse; 2. sanitary architecture and building, including plans and models of dwelling-houses, public assembly rooms, hospitals, &c.; 3. water supply, ventilation, disinfection, heating, and lighting; 4. smoke consuming apparatus, and methods for the purification of polluted rivers; 5. food, clothing, and personal conveniences, including specimens of pure and unadulterated food, baths, &c.; 6. disposal of the dead by burial and cremation; and, 7. sanitary literature. Miscellaneous articles not here named specifically will be arranged in the classes to which they are most closely allied. A promise has already been received from the Cremation Society of London that a model of the apparatus they have adopted—which is identical with that approved by the Cremation Conference held at Dresden two or three years ago—will be on exhibition. The apparatus itself has not as yet been constructed in this country. Continental as well as English manufacturers will be invited to take part in the exhibition, which, it will be seen, is likely to be one of special interest and value.

E. SCHMIDT gives the following process for detecting the adulteration of beeswax with resin:—Treat the suspected sample with HNO_3 , and add NH_3 . Pure wax yields a yellow solution; adulterated wax a reddish-brown solution, due to the formation of nitro compounds.

PHILOSOPHICAL PUZZLES.—An American writer shows, by a perfectly just argument, that the much-used maxim, "All rules have their exceptions," is really self-contradictory. If all rules have exceptions, this maxim is itself a rule, and therefore must also have its exceptions. Consequently, the proverb at the same time affirms that all rules have their exceptions, and that some rules do not, which is an obvious case of proverbial suicide.—*Lancet*.

CATAPLASM OF FUCUS CRISPUS.—Spread out evenly a sheet of carded wadding and pour on it a concentrated mucilaginous infusion of *Fucus crispus* (Irish Moss.) Cover with another sheet of carded wadding, and beat lightly with a soft brush to cause the jelly to be evenly absorbed. Then dry at a moderate temperature. When used place the sheet in a large plate and moisten with boiling water.—*Am. Journ. Pharm.*

A GERMAN OIL SAVER.—The drawing which accompanies this note represents an apparatus patented in Germany, and introduced by a firm in Berlin, for the safe and cleanly storage of petroleum and other oils. We are not aware that the "Saver" has yet been brought into England, but we should advise the inventors to try this market if their apparatus is found to answer well where it has been tried. The essential



portion of the invention consists of a pump, which in one of the drawings is shown fixed in the vessel, and by means of which the oil can be drawn up within the holder. This pump can also be removed, and used as is shown in the other sketch to transfer oil from a cask to the vessel when necessary. The circular before us also states that the apparatus can be perfectly closed and transported with safety.

Trade Notes.

MR. B. ROBINSON, of Pendleton, has altered the style of his toothache syringe, which is now a very pretty and handy article. The liquid is contained in a glass bulb, so that it can be seen, and is easily applied to any tooth or cavity.

MESSRS. AYRTON, AUSTIN & SAUNDERS, of Liverpool, have changed the style of their firm to "Ayrton, Saunders & Co.," Mr. J. Austin having ceased to own any interest in the business from the 1st of the current month.

AT THE LAST MEETING of the King's Norton Guardians and Sanitary Committee, it was resolved to supply the necessary drugs for the use of the indoor poor at a cost not exceeding 20l. per annum, any amount exceeding that sum to be charged to the medical officer. It was suggested by the chairman that drugs should also be supplied by the guardians for the use of the outdoor paupers, but after some discussion that motion was lost.

THE *Monetary Gazette*, in a series of very clever portraits one in the *Vanity Fair* style, but chiefly of financial or commercial notabilities, published last week a likeness of Mr. Felton, the proprietor of the "specialité" sherry, with the legend "He made a specialité."

A MEETING of creditors in the matter of a petition filed by James Edwin Meacham, chemist and druggist, who carried on business in Steelhouse Lane, Birmingham, was held at the offices of Messrs. Hawkes & Weekes, solicitors, Temple Street, Birmingham, on the 24th ult., Mr. Smith in the chair. Mr. Weekes represented the debtor, and Mr. Lomas Harrison the creditors. The statement submitted showed liabilities, 306*l.* 2*s.* 2*d.*; assets, 53*l.* 1*s.* 5*d.* The debtor accounted for his stoppage by paying a larger composition than he was able to do on a former occasion. It was resolved to wind up the estate in liquidation, and Mr. C. T. Starkey was appointed trustee, and Messrs. Hawkes & Weekes were entrusted to register the resolutions.

FEEDING BOTTLE "FIXINGS."—We have this month received from different houses a valuable improvement and an important adjunct to the furniture of the indispensable feeding bottle. Messrs. Lynch & Co. have combatted a serious trouble which mothers, and perhaps fathers more especially, have long recognised. The patient sire who, on a cold winter's night, has been required to fit the tube and teat on to the union joint, will appreciate the advantage now offered by Lynch's patent of getting the whole thing in one piece. There is still a place for the shield, but neither tube nor teat can come apart, and the difficulty which at first suggests itself as to the cleaning of the tube by the new arrangement turns out to be no difficulty at all, as the ordinary tube brush will pass through the hole of the nipple quite easily.

Messrs. Bourne & Taylor have manufactured a neat little bag, thickly lined with flannel, which they term the "Feeding Bottle Cosy," and the purpose of which is to keep the contents of the bottle warm without having recourse to fires, lamps, or similar devices.

THE PHILADELPHIA EXHIBITION.—On the closing of the Centennial Exhibition, a company was formed in the United States for the purpose of purchasing that portion known as the "Main Building," and converting it into a "Permanent and Continuous International Exhibition of Industrial Products and Works of Art," somewhat similar in plan to our Crystal Palace. The Exhibition seems to have created in America a demand for first-class European goods, and to encourage and develop this demand the promoters will provide exhibitors with space and cases free of charge. *Bona fide* samples will be admitted duty free, and the Bureau of Management undertake to give information as to prices, &c., so that exhibitors need not appoint special agents. On all goods sold while actually on exhibition a charge of 10 per cent. commission is made, while on orders for future delivery 5 per cent. will be charged. Mr. T. C. Trendell, of 8 Craig's Court, Chancery Cross, S.W., has been appointed London agent, and will supply further information.

AT A MEETING of the shareholders of the Extract of Meat Company (Limited), held on June 5, in London, a balance of profit for the year ending March 31, 1877, was declared amounting to 56,694*l.* 3*s.* 11*d.*, which is to be distributed as follows:—

| | £ | s. | d. |
|--|--------|----|----|
| To pay interest at 5 per cent. | 21,432 | 0 | 0 |
| " " a bonus of 4 per cent. | 14,288 | 0 | 0 |
| (Both free of Income Tax.) | | | |
| " carry to the Reserve Fund | 10,000 | 0 | 0 |
| " deduct for percentage of the representatives of the late Mr. Giebert, General Manager at Fray Bentos | 326 | 11 | 9 |
| " deduct for percentage of Mr. Charles H. Croker, Manager at Fray Bentos | 617 | 14 | 6 |
| " deduct for percentage of European Directors and River Plate Local Directors, 15 per cent. | 4,632 | 18 | 11 |
| | 51,897 | 5 | 2 |

Leaving a sum of 4,796*l.* 18*s.* 9*d.* to carry forward to profit and loss new account.

Obituary.

BALKWILL.—May 6, 1877, Mr. William Hancock Balkwill, chemist and druggist, Kingsbridge, Devon. Aged 66 years.

BROWN.—April 15, 1877, Mr. Thomas Brown, pharmaceutical chemist, Trongate, Glasgow. Aged 48 years.

BROWN.—May 17, 1877, Mr. Charles Miller Brown, chemist and druggist, Witney, Oxon. Aged 45 years.

FARNELL.—April 18, 1877, Mr. Joseph Farnell, chemist and druggist, Laisterdyke, Bradford. Aged 69 years.

FARRAIRN.—May 23, 1877, Mr. Henry Fairhairn, chemist and druggist, Alnwick. Aged 73 years.

HERRON.—May 7, 1877, Mr. Archibald James Herron, chemist and druggist, Margate. Aged 35 years.

HOOD.—April 23, 1877, Mr. James Hood, chemist and druggist, Morpeth, Northumberland. Aged 69 years.

MORGAN.—April 13, 1877, Mr. Charles Morgan, chemist and druggist, Ross. Aged 57 years.

WILSON.—April 13, 1877, Mr. William Wilson, chemist and druggist, Oldham. Aged 51 years.

WHITFIELD.—May 8, 1877, Mr. John Lockley Whitfield, pharmaceutical chemist, Worcester. Aged 82 years.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, successor to L. de Fontaine-moreau & Co., 4 South Street, Finsbury, London; and at Paris and Brussels.]

Provisional Protection for six months has been granted for the following:—

1486. E. Blakey, of Halifax, Yorkshire. Improvements in galvanic batteries. Dated April 16, 1877.

1536. H. B. Condy, of Battersea, Surrey. Improvements in the manufacture of soda and in the processes employed therefor. Dated April 19, 1877.

1548. J. Unwin, of Sheffield, Yorkshire. Improvements in the preparation and preservation of an electro depositing solution of nickel. Dated April 20, 1877.

1608. L. Sallien, of Brussels. An improved apparatus for filtering liquids, applicable also to other similar purposes. Dated April 25, 1877.

1610. J. J. L. Bremond, of Paris. Improvements in apparatus for administering medicated baths. Dated April 25, 1877.

1622. N. and J. Greening, both of Warrington, Lancashire. Improvements in machinery for screening lime in the manufacture of bleaching powder. Dated April 25, 1877.

1668. G. S. Hazlehurst, of Runcorn, Cheshire. Improvements in apparatus for condensing noxious and other gases and vapours. Dated April 30, 1877.

1730. H. A. Dufrene, of Paris. Improvements in the process and apparatus for producing cold. Dated May 3, 1877.

1733. E. K. Muspratt, of Widnes, Lancashire. Improvements in furnaces for the production of sulphate of soda or potash, applicable also to other purposes. Dated May 4, 1877.

1760. W. Jones and J. Walsh, both of Middlesborough, Yorkshire. Improvements in and relating to apparatus for the manufacture of sulphates of soda and potash, parts of which invention are applicable to other chemical apparatus. Dated May 5, 1877.

1772. H. Y. D. Scott, of Ealing, Middlesex. Improvements in the treatment of faecal matters and other ammoniacal compounds, and the production of manures therefrom. Dated May 7, 1877.

1806. J. H. Morgan, Walham Grove, Fulham, Middlesex. An improved deodorising and disinfecting compound or solution. Dated May 9, 1877.

1820. C. Eckrodt and W. H. Searle, both of Kingston-on-Hull, Yorkshire. Improvements in wrappers or envelopes used in presses for extracting oil from seeds and making oilcake therefrom. Dated May 10, 1877.

1868. H. B. Condy, of Battersea, Surrey. An improved apparatus for automatically disinfecting and purifying the air in sick-rooms or other confined places. Dated May 14, 1877.
1881. F. Smith, of New North Road, London. An improved stopper for bottles. Dated May 14, 1877.
1971. P. Toninetti, of Hamburg, Germany. An improved method for preserving fishes. Dated May 19, 1877.
1973. P. Toninetti, of Hamburg, Germany. An improved method for preserving meat. Dated May 19, 1877.
- Letters Patent have been issued for the following :—
3992. C. F. Claus, of Great Saint Helen's, Bishopsgate Street, London, and A. E. G. Lowndes, of Queen Anne's Gate, London. Improvements in the manufacture of and in the application of certain detergents. Dated October 16, 1877.
4360. H. C. Sanders, of Victoria Gardens, Ladbroke Road, London. Improvements in stoppers for bottles, jars, and other vessels. Dated November 11, 1876.
4398. P. C. Duclos, of Lyons, France. Improvements in stoppers for bottles, jars, and other articles made of vitreous materials for containing alimentary and other substances. Dated November 13, 1876.
4406. J. M. Richards, of Great Russell Street Buildings, London. Improvement in valved nozzles for bottle stoppers. Dated November 14, 1876.
4416. J. Wood, of Dumfries, North Britain. Improvements in taking impressions or casts of the mouth for use in making artificial teeth, and in apparatus for the same and other dental operations. Dated November 15, 1876.
4455. J. M. O. Tamin, of Paris, France. Improvements in the method of and apparatus for producing artificially, at varied temperatures and pressures, oxygenated, ozonised, and azotised atmospheres or atmospheric baths, and the employment therewith of gases suitable as vehicles for the impregnation of volatile substances. Dated November 17, 1876.
4573. C. Rands, of Holloway, London. Improvements in the treatment of vegetable substances for the purpose of obtaining alcoholic liquids therefrom. Dated November 25, 1876.
4755. T. Hyatt, of Gloucester Gardens, Hyde Park, London. Improvements in adhesive plasters, and in the means, modes, and processes for manufacturing the same. Dated December 8, 1876.
4826. F. Maxwell-Lyte, of Essex Street, Strand, London. Improvements in the production of ammonia anhydride. Dated December 13, 1876.
77. E. Solvay, of Brussels. Improvements in the manufacture of chlorine. Dated January 8, 1877.
91. E. Solvay, of Brussels. Improvements in the manufacture of hydrochloric acid. Dated January 12, 1877.
171. E. Solvay, of Brussels. Improvements in means of utilising certain silicates and aluminates of lime and of magnesia. Dated January 12, 1877.
297. S. Williams, of Chelsea, London. Improvements in the production of pigments. Dated January 24, 1877.
856. C. H. Ellis, of Hart Street, Bloomsbury, London. An improved portable hot air or vapour bath, and apparatus for heating the same, such apparatus being applicable to other heating purposes. Dated March 3, 1877.
962. S. Hallsworth, of Armley, near Leeds, and R. Bailes, of Woodhouse Carr, Leeds. Improvements in the means or method of treating and clarifying sewage or other impure waters. Dated March 9, 1877.
960. L. Rose, of Curtain Road, Finsbury, London. An improved stopper for bottles for containing gases or gases combined with liquids, such as aerated beverages, whereby improvements in stoppering bottles can be effected. Dated March 9, 1877.
1219. J. H. Bald, of Hebburn-on-Tyne, Durham. Improvements in utilising residual and other oxides of iron. Dated March 28, 1877.

Specifications published during the month :—

Postage 1d. each extra.

1876.

3424. R. C. Richards. Uterine appliance. 4d.
3703. J. M. Richards. Apparatus for perforating pills. 4d.
3718. C. A. McEvoy. Inhaling apparatus, &c. 6d.
3736. A. C. Herts. Abdominal supports. 6d.
3743. J. McKendrick and H. W. Ball. Distilling water. 6d.
3745. H. Collett and J. B. Denans. Apparatus for distributing, purifying and regulating the flow of liquids. 6d.
3782. J. L. Pulvermacher. Appliances for generating and applying electricity. 8d.
3834. J. Holden. Receptacles for acids, &c. 6d.
3836. F. G. Morton. Apparatus for treating paraffin, &c. 2d.
3843. J. J. Sachs. Treating animal and vegetable substances for impregnation or exhaustion. 2d.
3848. J. Maclear. Utilising bye-products of soda and potash manufacturers. 2d.

3894. W. and A. Young and A. Neilson. Destructive distillation of bituminous substances. 6d.
3976. B. Wahl. Composition for killing vermin. 2d.
3993. W. Webster, jun. Applying endosmose action to apparatus for detecting the presence of hydrogenous gases in mines, &c. 6d.
4006. N. B. Downing and J. E. Hughes. Evaporating alkaline solutions. 6d.
4026. T. Hyatt. Chest protector. 2d.
4048. G. E. Davis and J. B. Altken. Treatment of phosphates of alumina, &c. 4d.
4054. R. J. Hutclings. Revivifying the spent acid, &c., used for pickling metal plates. 2d.
4153. J. Cole. Magnetic apparatus for curative and remedial purposes. 4d.
4203. J. Watson. Treatment of sewage. 2d.
4446. K. Knott. Preserving meat. 6d.
4483. Comte T. de D. Brochockl. Preparation of bleaching material. 4d.



BANKRUPTCY.

HEIM, CHARLES MUNGO, Marathon House, Staple Hill, Bristol, surgeon. May 10.

LIQUIDATIONS BY ARRANGEMENT OR COMPOSITION.

Notices of first meetings of creditors have been issued in re the following estates. The dates are those of the "London Gazette" in which the notices first appeared.

- BAINBRIDGE, THOMAS YOUNG CAMPBELL, Farnham, Surrey, gentleman, late Holborn, distiller. May 10.
- BAKER, HENRY THOMAS, 214 Cable Street, St. George's-in-the-East, bottle merchant. June 8.
- ELLISSON, JOHN BRADLEY, Wombwell, Yorkshire, chemist. May 25.
- FRANK, JOHN MEAD, 13 Dean Street, Newcastle, chemical broker, merchant, and agent. May 19.
- GOLDING, RICHARD LYNN, 4 Dunstable Terrace, Richmond, chemist. June 2.
- JONES, JOHN, Drake Street, Rochdale, chemist. May 18.
- KENT, JOSHUA WILLIAM, Station Street, Stratford, commercial traveller, prev. manufacturing chemist. June 4.
- LEWIS, THOMAS, Clifton Street, Aberdare, aerated water manufacturer. May 22.
- OLDHAM, GERVASE, 17 Chestergate, Macclesfield, chemist. May 23.
- PARKER, JOSEPH ABRAHAM JACQUES, Newcastle, surgeon dentist. May 26.
- SAER, DAVID PROTHORPE, Main Street, Pembroke, surgeon. June 2.
- SHAW, HENRY, 2 King Street, Finsbury, and 144 Bishopsgate Street Without, surgeon. May 10.
- STAMPEL, WILLERITON, Louth, Lincolnshire, miller, confectioner and mineral water manufacturer. May 4.
- SYKES, WILLIAM, 180 Mill Street, Crewe, late 21 Curzon Street, Burnley, herbalist. May 31.
- WALKINGTON, WILLIAM, 2 Glendower, Tenby, retired chemist. May 16.
- WARDEN, FREDERICK, 52 Preston Street, Brighton, chemist. May 28.
- WILTHEW, THOMAS CARR, Hexham, and St. John, Lee, near Hexham, chemist. May 19.
- WOODS, JOSIAH, 39 Bentinck Street, Birkenhead, aerated water manufacturer and victualler. May 23.

DIVIDENDS.

- HIRST, FRANCIS O. (Liq.), Sheffield, chemist. 1st div. 5s.; E. Bennett, 50 Norfolk Street, Sheffield.
- LAWSON, WILLIAM, Lanrecockirk, Kilmcardine, druggist (Seq.). 1st, J. Wilson's, 59 St. Vincent Street, Glasgow, on and after May 30.

PARTNERSHIPS DISSOLVED.

- EAGLAND & STRICKLAND, Leeds, surgical instrument makers.
- CIMPLETT & PACK, Ryde, mineral water manufacturers.
- GOODHURGE & GOODHURGE, Shepton Mallet, chemists.
- HASSELL & HENNER, Holborn Viaduct, chemists.
- HURD & SAYEY, Tatton, surgeons.
- MARSHALL & MELUISH, Morpeth, chemists.
- NEWMAN & ATKINS, Huddersfield, surgeons.
- RANSOME & RETFORD, Manchester, chemists.
- ROGERS & WETHERILL, Castleford, bottle manufacturers.
- SNEYD & SNEYD, Walsall, chemists.



TERMS.—Announcements are inserted in this column at the rate of one penny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word. If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C." the envelope to be endorsed also with the number. The publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

FOR DISPOSAL.

Ten doz. genuine stamped porous plaster for 3*l.* 8*s.* 6*d.* 33/52.
 French pattern counter scales, walnut stand, brass weights.
 Martin, Clevedon.
 Lined oil cistern, 100 gallons, with loose cover and tap, complete; cash price 2*l.* Cooper, Chemist, Brentwood.
 Nine-gallon cask of carbolic acid; what offers, cash or exchange? Kay, Chemist, Crewe.
 Evans' Materia Medica cabinet, new and quite perfect; what offers? Lee, West Street, Crewe.
 Vertling's chemical balance, small size, with several additions, glass shade, &c. 37/40.
 Southall's 2*s.* cabinet; price 15*s.* 6*d.* Apply Thomas Clayton, 10 Vigo Street, London, W.
 One-oz. potassium, 5*s.*; 3-oz. quinine valer, 7*s.* 6*d.* Hambridge, Midsomer Norton, Bath.
Pharmaceutical Journal, unbound, from January, 1871, to present time, 5 numbers missing. 33/50.
 Syr. violæ ver., 12*s.* per dozen lbs., packages free. Redfern & Johnson, Ashby-de-la-Zouch.
Pharmaceutical Journals. Bell, Chesshire & Co., 378 Coldharbour Lane, Brixton, S.W.
 Recipe for spendid lavender water, 1*s.* 6*d.* "Chemist," care of Mr. Filtness, Rotherfield.
 One cwt. cask, twenty-five 10-lb., and twenty-one 5-lb. tins McDougall's sheep-dipping composition; all in good condition, very cheap. 14/49.
 Twenty-three 4-oz. bottles Howard's quinine, and a 25-oz. tin; 16*s.* net cash; carriage paid on 12 oz. J. Peebles, Lochec, Dundee.
 Three carbon filters, quite new; glass vases, covered with wicker, quart size; cash or exchange. J. Samuel, Post Office, Binkdale Park, Southport.
 Vine corks, clean, and excellent quality, 8½*d.* per gross, cost 1*s.* 4*d.*, bales, 100 and 150 gross. R. Halford, New John Street, Birmingham.
 Bicycle, bright, spider, 50-inch driving wheel, new, and perfect, cost 14*l.*, price, 9*l.* Halford, Chemist, New John Street, Birmingham.
 A good honest English silver lever watch, cost 6*l.* 10*s.*, and gold Albert chain, cost 4*l.*, lowest price, 6*l.*, a bargain. Chant, Chemist, Langport, Somerset.
 Daniell's battery, complete, 30*s.*; electrical cylinder machine, 55*s.*; also 50 superior magic lantern slides, assorted, 1*s.* each. "Chomicus," 125 Hyde Road, Manchester.
 Twenty choice recipes for horse and cattle medicines, result of long veterinary practice, 5*s.* V. S., care of Mr. Filtness, Rotherfield.
 A bargain.—Bent glass ebonised mahogany show case, 5 feet 3 by 18½ inches, in good condition, 4*l.* M. E. Foster, 50 Bishopsgate Within, E.C.
 Copper pan, 19 inches diameter, stoneware barrels and jars, 4 to 6 gallons, with hole for tap; off-ers wanted. B., 25 Queen Street, Ramsgate.
 Half-gallon Robinson's patent Percolator; carved wood Phoenix, 30 inches by 21; six doz. 2-oz. white covered pots; six No. 2 Wedgewood mortars; what offers? Elliott, Chemist, Walsall.
 Bicycle, 50-in., bright, spider, improved construction, new, and perfect, excellent roadster, very little used. Cost 17*l.* Cash offers wanted immediately. Hart, Chemist, Kegworth via Derby.

150 very fine specimens of drugs known to pharmacy and commerce in card-board boxes, with descriptive labels attached. The collection is unique, and has been made with discrimination. Advertiser would be glad of offers. 23/51.
 Pocket cases of surgical instruments, cost 2*l.* 10*s.* and 30*s.*; also amputating case, by Evans, cost 4*l.* 10*s.*; quantity of dental forceps and stopping instruments at half cost price. Dauvers, 154 Leadenhall Street, E.C.
 Handsome mahogany (solid fronts) nests of drawers, with glass knobs, only in use two years, price 7*l.* (37 drawers); 5*l.* (23 drawers); 4*l.* (18 drawers); 11*l.* (70 drawers). Address, A. Fairweather, 59 King Street, South Shields.
 A strong iron safe, with lock-up drawers inside, size 19 inches by 13 inches by 14 inches, for disposal, having bought larger one; lowest price, 3*l.* Fred. Gibson, 93 Gooch Street, Birmingham.
 Two doz. olive 4-lb. pots, labels in fair condition, at 24*s.*; two handsome specie jars and sundry globes, cheap; pill machine, 24, good condition, 12*s.* Bowles, Chemist, Bedminster.
 Cheap, a complete set of shelving and drawers, in black and gold; large glass case, 6 feet by 36 inches; smaller ditto, 33 inches by 36 inches; splendid large specie jar, with royal arms, total height, including mahogany pedestal, 48 inches; several window carboys; pill machine. Walker & Son, Dresden, Staffordshire.
 Thirty 30-oz W.M., eighteen 10-oz. N.M. stopped rounds, 8*s.* and 6*s.* 6*d.* per doz., new; octagon lamp, 2 lenses, 2 brackets, similar to Maw's fig. 6, repaired, painted, and packed, 2*l.* 10*s.*, cheap; 200 Cologne washed, 10*s.*; 1,000 octagon inks, 2*s.* 6*d.* 31/52.
 For the benefit of June and July Students.—Fresh botanical specimens of aconite, larkspur, belladonna, broom, conium, fool's parsley, savin, digitalis, &c., will be forwarded free for 2*s.* 6*d.* (separately, 4*d.* each), by John Saunders, 79 Gaisford Street, N.W.
 Sea medicine chest, second-hand, for 21 men and upwards, similar to Maw's fig. A, containing 41 bottles, scales, &c., dimensions, 25½ in. by 15 in. by 16½ in., in good condition, 25*s.*; also about 12 gross dispensing bottles, best quality, 4-oz., fourth part flat, at 8*s.* 6*d.* Andrews, chemist, Eastbourne.
 Sponge case, fig. 92, 5*l.*; soda water stand, fig. 62, 50*s.*; desk and case, as fig. 21, 65*s.*; toothbrush case, fig. 52, 25*s.*; counter cases, as figs., a 4 ft. 7 in. long, as fig. 17, 3*l.* 10*s.*; fig. 22, 4*l.*; a 5 ft. 3 in., as fig. 96, 5*l.*; a 6 ft. 3 in., as fig. 92, one sheet of plate glass, 7*l.* 10*s.*; 2 4-ft. do., as fig. 101, 4*l.* 15*s.* each; a 9 ft., as fig. 104, 4 bent glasses, 7*l.* 10*s.*; a 6 ft., as fig. 105, 7*l.* 10*s.*; a 4 ft. 9 in. do., as fig. 105, 6*l.*; 2 as fig. 27, 50*s.* each; a 2 ft. 10 in., as 101, 3*l.*; toothbrush case, bent plate glass, 30*s.*; do., as fig. 52, 25*s.*; fig. 7, 35*s.*; sponge cases, as fig. 90, 75*s.*; 92, 5*l.*; soda water stand, 63, with fountain in centre, 90*s.*; as fig. 62, 50*s.*; desk and case in front, fig. 21, 65*s.*; 9 ft. counter, 70*s.*; 9 ft. 6 in. do., 5*l.* Natali, 213 Old Street.
 One 5 ft. 7 long, one 6 ft. long, handsome mahogany dispensing screens, as Treble's 136; one 6 ft. 6 long handsome mahogany plate-glass dispensing screen, and one 4 ft. long ditto, as Maw's 163 and 164; one 7 ft. long handsome mahogany dispensing counter, with plate-glass cases at each end and mirror in centre, as 170 Maw's; one 4 ft. long, one 4 ft. 6 long, one 5 ft. long handsome mahogany plate-glass cases, as fig. 40 Maw's; two 2 feet 6 long upright mahogany plate-glass counter cases, as 39 Maw's; one ditto, with desk at back, as 39 Maw's; handsome sponge cases, as 90 and 92 Maw's; one 4 ft. 3 long bent plate-glass counter case, as fig. 11 Maw's; two mahogany counter cases, as figs. 3 and 8 Maw's; handsome mahogany show stands, as figs. 19 and 54 Maw's; tooth-brush case, as 72 Maw's; two soda water stands, as 59 and 63 Maw's; 4 mahogany dispensing counters, from 4 ft. to 8 ft. 6 long; 8 mahogany top counters, from 5 ft. to 16 ft. long; mahogany label chest, as 26 Maw's; 750 gold-labelled shop bottles, all sizes; 18 4-lb. blue shop jars; 3 doz. 4-lb. ditto, all with gold labels; 24 4-lb. and 24 2-lb. gold-labelled olive shop jars; six handsome gold-labelled specie jars, with gilt glass covers; 12 handsome gold-labelled jujube jars; 6 handsome gold-labelled show jars, as fig. D Maw's; counter scales, as figs. 1 and 6 Maw's; 3 pill machines. Lloyd Rayner, 333 Kingsland Road, London.

- Herbarium of plants, useful for minor students, 3s. Tully, Tunbridge Wells.
- Specie jar, stands, sundry jars, blue and white marble mortar, teeth specimens, show cases, several founts type. "Delta," Post Office, Gipsy Hill.
- How's 5 guinea spectroscopic, Didier's clockwork galvanic battery, cost 4l. 4s., and 6-cell Grove battery, nearly new, cost 3l. 10s., half price. Danvers, 154 Londenhall Street, E.C.
- Fine Turkey opium, B. P. percentage of morphia; in splendid condition, 22s. 6d. per lb.; 4 lbs., 22s. per lb.; 7 lbs., 21s. 6d. per lb.; 14 or 21 lbs., 21s. per lb. Good seconds, a few pounds left at 20s. per lb. Makes a bright tincture. Terms, net cash. Orders amounting to 5l. or over carriage paid. Samples for three stamps. Robson, Chemist, Grimshy, Lincolnshire.
- Six handsome mahogany wall cases, with and without cupboards under; one 10 ft., one 12 ft. long, handsome nests mahogany-fronted shop drawers, with glass labels and knobs, and lockers under, with shelving, pilasters and mahogany cornice on top, forming complete fittings; one 3 ft. 9 long, one 4 ft. long, one 6 ft. long, one 7 ft. 3 long, one 10 ft. long, one 12 ft. long nests mahogany-fronted, gold-labelled, shop drawers; one 4 ft. long mahogany plate-glass counter case, as Maw's 95; handsome shop lamps, as 5 and 6 Maw's; handsome pillar lamp, as fig. 11 Maw's; handsome globular lamp, as fig. 8 Maw's; 3 brass window stall plates; 4 handsome pillar gas brackets; 3 doz. 1-gal. black glass stock bottles; 2 doz. mahogany store boxes. Lloyd Rayner, 333 Kingsland Road, London.
- About 20 ft. run, in 3 sections, Spanish mahogany fittings, drawers, shelving, cornice, very handsome, 25l.; a superior dispensing screen, glass case at each side, looking-glass centre, with marble slab in front, handsome tablets on top and looking-glass backs to cases, 9l., a bargain; a 5-ft., as 164, with looking-glass back, 7l.; 26 4-lb. white ointment jars, 1s. 9d., labelled; 24 6-lb. white ditto, 2s. 3d. each; 10 8-lb. blues, 2s. 6d. each; 10 doz. shop bottles, 60 oz., 9s. 6d. doz.; 36 6-quart stock bottles, black capped, 1s. 8d. each; 2 8-gal. carboys, cut toppers, with mahogany stands and runners, 40s. pair; several other smaller pairs; a pair specie jars, glass gold covers, elaborately labelled, 65s. pair; a ditto, 55s.; one Royal Arms, 36 in. high, 5l. almost new, gold cover; a pair Royal Arms, 26 in. high, gold covers, almost new, 4l.; a lot of jars, as fig. D, elaborately labelled, 6s. 6d. Natali, 213 Old Street.
- 90 choice perfumery and other recipes of a late London wholesale perfumer are for disposal. Any selected ten, 1l. 1s. List on application. 14-carat new gold Geneva lever watch, beautifully chased, goes well, a bargain, 5l. 5s.; 50-inch bright spider Humber bicycle, nearly new, cost 10l. 10s., a bargain, 7l. 10s.; Muter's "Notes on Dispensing," 2s. 6d.; 25 prescriptions given at the last and previous Minor Examinations, 2s. 6d.; Wills' "Postal System Notes," for Minor, 7s. 6d.; collection of questions asked at the Minor, 2s. 6d.; "Register of Chemists and Druggists," for 1874, 3s. 6d.; the "Minor Examination," by Tully, 9d.; Lescher's "Elements of Pharmacy," new, 5s.; Smith's "Pharmaceutical Guide," new, 4s. 6d.; Tanner's "Signs and Diseases of Pregnancy," 7s. 6d.; Berjeau "On Syphilis," 2s.; Smith's "Principia Latina," part I., 2s.; Henry's "Latin Grammar," 1s. 6d.; Cooley's "Pharmaceutical Latin Grammar," new, 3s. 6d.; Baruard Smith's "Arithmetic," 2s. 6d.; Buckmaster's "Chemistry," new, 1s. Minor, 382 Lodge Road, Birmingham.

WANTED.

- A few shop bottles and pots. Chemist, 34 High Street, Putney.
- A sheep-dipping apparatus in good condition. A. Smith, Chemist, Crediton.
- Druggists' drawers, small size. State size and price; also shelving. Address, J. Samuel, Post Office, Binkdale Park, Southport.
- A large tincture press in good order. State make and lowest price. Jaap, 268 Buchanan Street, Glasgow.
- Gold-labelled shop bottles, cheap; homeopathic counter case. "Chemist," care of Mr. Filtress, Rotherfield.
- Bottle moulds and broken glass. W. B. Fitch, 167A Hemingford Road, Barnsbury.

EXTRACT FROM A LETTER.—The 7d. spent in Exchange Column sold my 10l. worth of dentistry tools.



It is a matter of much satisfaction that we are at last able to report an appreciable improvement in the trade of this country. It is dangerous to form a judgment from the returns of a single month, but there seems fair ground for assuming that we have, as a nation, at last turned the corner of the severe depression which has ruled in all commercial sections during the past two or three years. Our exports for May, 1877, were about 2 per cent. in advance of those for 1876, the total figures being—May, 1876, 17,055,504l.; May, 1877, 17,461,139l. The exigencies of the war, no doubt, account in some degree for this improvement; but generally it is due to an increased demand for the textile fabrics which are the heart of England's commercial supremacy. The imports, too, which are 18 per cent. in advance of those of May last year, yield also healthy indications. To a great extent the increase is occasioned by an augmented purchase of the raw material of our chief manufactures. All this tends to show a distinct increase in the general briskness of British trade, and unless exceptional circumstances have given to the month of May a deceptive character, we may hope henceforth for a gradual improvement in our commercial prospects.

The following are the returns of chemical exports during May:—

| | 1876 | 1877 |
|----------------------------|---------|---------|
| | £ | £ |
| Alkali... | 225,013 | 219,575 |
| Other chemical products .. | 171,763 | 154,309 |

These items, therefore, do not seem to have shared in the general prosperity. The difference made manifest is, however, due rather to a reduction in market prices than to a decrease in the actual quantities bought by foreign merchants.

The month has been marked by an almost entire absence of speculation. The sharpest dealers made their *coups* before the declaration of war; their immediate followers burned their fingers, and consequently both are content to rest for the present. In saltpetre, for instance, the decline which we noted last month has still further manifested itself in consequence of an absence of demand, and the first Bengal lots are now quoted at 24s. to 25s., instead of at 27s., which was reached when war was found to be inevitable. This decline has not been prevented, though it has, perhaps, been checked, by a sudden advance in nitrate of soda, due to an earthquake at Iquique which has interfered with the export. German refiners especially depend on this supply.

Within the past ten days a considerable change has taken place in the value of the soda products. After falling as low as 72s. 6d. ex ship, crystal has been in active demand and has advanced to 82s. 6d. asked.

Ash was also in more demand and somewhat firmer in price at $1\frac{3}{4}$ to $1\frac{7}{8}$ per cent. per cwt. landed. Bicarbonate shared in the improvement noticed in the two above-mentioned articles, and with a good business done, was at the end of the week firm in price at 11s. 3d. per cwt. landed. Bleaching powder is still sold at 6s. 3d. per cwt., but higher rates are anticipated. Cream of tartar has been in large demand throughout the month, and the price has advanced from 98s. to 102s. 6d., at which latter figure it closes firmly. Tartaric and citric acids have also been in strong demand, and close higher. Citric is now offered at 2s. 8d. and tartaric is very strong at 1s. 5 $\frac{1}{2}$ d. Sulphate of quinine has varied somewhat, and though the speculation in it seems to have died out, Howard's is now quoted at 16s. 6d., and Pelletier's at 15s. 3d. to 15s. 6d. Barks are, however, in better supply. Unless the war should occasion a special demand

(and the reports of typhoid in both camps render this quite possible) there is a fair probability of a drop in the price. A lot of 300 ozs. of Pelletier's sold at auction on the 4th inst. brought no more than 14s. 6d., and another lot of 900 ozs. a few days earlier was bought in at 15s.

Chlorate of potash is fairly steady at 9d. per lb., although in some cases somewhat less money has been accepted. Prussiate still dull at 11d. to 11½d. per lb. for English, and 10¾d. to 11d. for foreign. For bichromate there is a fair demand at the unchanged price of 4½d. per lb., less a discount. Sulphur sells more readily, quotations unaltered at 9s. 9d. per cwt. for roll, and 11s. 9d. to 14s. per cwt. for flour, according to make. Alum without change at 7l. 5s. to 7l. 10s. for lump, and 7l. 17s. 6d. to 8l. for ground, with a moderate demand. Arsenic dull and unaltered in quotation at 9s. per cwt. landed for powdered. Refined borax, with a fair demand, is steady in price at 40s. per cwt. net money for London make. Sugar of lead unchanged at 37s. to 38s. per cwt. for best white. Green copperas in moderate demand at 55s. to 65s. per ton, according to packages. Phosphorus steady at 2s. 8d. for wedge and 2s. 9d. for sticks, with a fair business done. Quicksilver has kept steady at its former price of 7l. 5s. per bottle.

The drug markets have been fairly well supported, and prices have not largely varied. No disposition has been indicated to venture on the probable rise of certain Oriental drugs, and those to which speculative attention had been directed have scarcely maintained their position. Opium remains very dull, with scarcely anything doing. The new crop is reported to be good, though it must be obvious to everyone that its chance of a safe ingathering may be imperilled. Camphor is arriving more abundantly, and reports from abroad indicate increasing stocks, so that it is likely that present quotations will hardly be maintained long enough to affect the price of refined. Cardamoms have been bought rather freely, at some advance, some fine Aleppy making as much as 4s. 4d. Malabar has gone as high as 5s. 2d. Cantharides have become dull again, and have been bought in at 2s. 8d. and 2s. 10d. Castor oil is a little stronger. Camomile flowers are much cheaper. Italian essences have been quoted at lower rates, and may still be bought cheaply. Cinnamon bark has come forward in moderate quantities, and East India has been parted with on easier terms. Holders of Calisaya, however, have not been disposed to make reductions, and consequently business in this has been restricted to private transactions. In consequence of an entire absence of demand senna and jalap have somewhat drooped in price. Ipecacuanha is also duller since its spurt last month, and sufficient supplies have since come to hand. Balsam of tolu has been bought to some extent for speculative purposes, and the price may be advanced. Assafetida has met with a good demand, at full rates; myrrh and olibanum are both somewhat easier. Musk also has only sold at an average reduction of 1s. to 2s.

Leinglass auctions were held on the 12th inst. Penang and Saigon went off slowly, and only partly sold at a decline of 3d. to 4d. per lb. for tongue, 2d. for leaf, and 2d. to 3d. for cake. Bombay, however, sold readily at an advance of 1d. to 3d. for toague, and 1d. to 2d. for cake; bladder pipe at full rates to 1d. higher. Brazil met a good demand; lump at steady rates for fine to 2d. advance for ordinary and medium, but tongue rather easier. The Russian leaf offered was bought in at 10s. 6d. and 12s., and 76 bales of manufactured Japan were also bought in at 1s. 7d. to 1s. 9d.

The cochineal sales on the 6th were very flat, only 138 bags finding buyers at a decline of 2d. per lb. for Teneriffe black, and 1d. to 2d. for silver; for Mexican silver only 2s. bid.

The demand for indigo seems to be somewhat slack, as the deliveries of East India for May were only 946 chests (554 home use, 392 export), against 1,885 chests last year. The landings in May were only 694 chests, against 2,089 in 1876, and the stock on the 31st was 21,256 chests, against 19,625 chests in 1876.

Notwithstanding the large stocks of shellac, there has been a good trade done at improved rates. A recovery of 4s. to 5s. per cwt. in best sorts has taken place since a month ago. Turmeric has only sold at a decline, bringing 19s. 6d. to 21s. Galls are not much in demand, and the stock is large. Latest prices are: for best, 75s. to 80s.; good blue, mixed with green, 75s.; white, 50s.; damaged, 43s. to 49s.; green, 45s.; green and white, 40s.

At the quarterly sales of cinnamon, held on May 28, a total of 2,424 bules was offered, and nearly the whole found purchasers. Fine sorts made about normal prices, but ordinary qualities averaged 1d. per lb. dearer.

The oil market has been dull throughout the month. Linseed and rapeseed oils, which, it will be remembered, were very freely bought during April, have been steadily declining in value since, and nearly all the advance accomplished in the value of these has been lost. Seal and cod oils have declined a shade, entirely from an absence of demand, but olive has been more freely bought, and at higher rates. The month sees a difference of about 20s. per tun in this article, and the advance may become more pronounced if the rate of exchange should become more favourable to Italy. Palm oil is higher, partly caused by the loss of a cargo in a steamer that was wrecked. Turpentine has fallen steadily to 25s., and petroleum, after being very dull, has rallied slightly, and now closes firm at 11d.

The subjoined table shows the stocks of various drugs at the Port of London on May 31 last, and also indicates the quantities landed and delivered for consumption between January 1 and May 31, 1877:—

| | Stocks | | Landed | | Delivered | |
|------------------------------|--------|--------|--------|--------|-----------|--------|
| | 1877 | 1876 | 1877 | 1876 | 1877 | 1876 |
| Aloes.....cs | 1,958 | 1,188 | 820 | 1,308 | 1,226 | 773 |
| ".....kgs | 21 | 31 | — | 1 | 4 | 1 |
| ".....gourds | 1,910 | 739 | 1,309 | 511 | 1,058 | 756 |
| Aniseed, Star.....cbs | 1,566 | 831 | 250 | 1,216 | 414 | 626 |
| Arrowroot.....cks | 12,397 | 10,438 | 8,040 | 9,864 | 5,449 | 5,417 |
| ".....bxs & tins | 6,575 | 4,073 | 5,750 | 5,229 | 3,359 | 3,208 |
| Balsam.....cks, &c. | 410 | 310 | 268 | 427 | 214 | 302 |
| Bark, Medicinal.....cks, &c. | 477 | 185 | 1,379 | 431 | 1,053 | 376 |
| ".....srns, &c. | 8,409 | 15,476 | 10,181 | 17,696 | 10,448 | 18,737 |
| ".....Tns tns | 2,998 | 349 | 3,539 | 1,210 | 5,291 | 1,545 |
| Borax.....pkgs | 1,172 | 1,957 | 235 | 2,073 | 464 | 2,013 |
| Bees' Wax.....bbs & srns | 359 | 345 | 71 | 239 | 126 | 305 |
| ".....cks & cs | 1,122 | 658 | 1,019 | 877 | 867 | 694 |
| ".....cakes | 107 | 151 | 88 | 439 | 100 | 1,024 |
| Japan vegetable.....pkgs | 4,912 | 6,407 | 3,261 | 4,246 | 2,965 | 4,132 |
| Camphor.....pkgs | 5,767 | 5,797 | 2,622 | 1,863 | 2,635 | 3,336 |
| Cardamoms.....chts | 766 | 902 | 311 | 925 | 376 | 588 |
| Coculus Indicus bgs, &c. | 2,235 | 2,307 | — | 223 | 154 | 114 |
| Colombo root.....pkgs | 883 | 934 | 267 | 119 | 100 | 93 |
| Cream of Tartar.....cks | 130 | 105 | 144 | 128 | 107 | 89 |
| Cubebs.....bgs | 266 | 471 | 30 | 216 | 44 | 130 |
| Dragosblood.....chts | 116 | 30 | 115 | 47 | 59 | 54 |
| Galls, E.I.....cks & cs | 3,892 | 2,082 | 5,129 | 3,891 | 2,718 | 2,612 |
| Mediterranean.....bks | 832 | 1,761 | 779 | 807 | 404 | 520 |
| Gum— | | | | | | |
| Ammoniac.....pkgs | 541 | 611 | 130 | 33 | 77 | 72 |
| Anini & Copal..... | 4,376 | 5,362 | 3,010 | 1,168 | 3,455 | 4,404 |
| Arabic, Barbary..... | 1,103 | 617 | 1,244 | 782 | 1,147 | 1,061 |
| ".....Turkey..... | 268 | 957 | 478 | 1,231 | 637 | 1,144 |
| E.I..... | 1,720 | 1,401 | 1,488 | 1,010 | 1,346 | 828 |
| Asafetida..... | 532 | 535 | 390 | 50 | 210 | 124 |
| Benjamin..... | 1,112 | 904 | 1,127 | 1,173 | 612 | 725 |
| Damar..... | 1,063 | 1,199 | 244 | 2,488 | 1,326 | 1,908 |
| Galbanum..... | 22 | 27 | — | — | 10 | 2 |
| Gumbege..... | 172 | 67 | 134 | 36 | 171 | 126 |
| Guaiaecum..... | 29 | 23 | 76 | 39 | 56 | 46 |
| Kino..... | 16 | 15 | 5 | 7 | 7 | 7 |
| Kowrie.....tms | 1,106 | 1,062 | 1,010 | 867 | 713 | 761 |
| Mastic.....pkgs | 108 | 84 | 18 | 13 | 20 | 92 |
| Myrrh, E.I..... | 286 | 188 | 221 | 103 | 190 | 150 |
| Olibanum..... | 5,139 | 3,919 | 6,726 | 4,883 | 3,036 | 3,464 |
| Sandarac..... | 635 | 678 | 846 | 746 | 727 | 728 |
| Senegal.....tms | 14 | 40 | 2 | — | 6 | 1 |
| Tragacanth.....pkgs | 421 | 155 | 607 | 144 | 247 | 127 |
| Ipecacuanha.....cks & bgs | 73 | 172 | 94 | 199 | 175 | 256 |
| Jalap.....bbs | 613 | 622 | 144 | 68 | 181 | 160 |
| Lac Dye.....chts | 14,564 | 11,129 | 4,029 | 1,815 | 1,170 | 1,279 |
| Nux Vomica.....pkgs | 1,872 | 2,369 | 571 | 2,782 | 210 | 2,692 |
| Oil— | | | | | | |
| Castor.....cks | — | 69 | 4 | 95 | 4 | 55 |
| ".....cs | 5,922 | 1,974 | 7,862 | 5,287 | 6,349 | 4,946 |
| ".....dpprs & tins | 5,350 | 3,158 | 6,692 | 6,029 | 4,195 | 8,017 |
| Palm.....tms | 161 | 386 | 997 | 842 | 1,343 | 1,320 |
| Cocconut..... | 3,601 | 3,820 | 5,411 | 3,977 | 4,714 | 3,813 |
| Olive.....cks, &c. | 676 | 921 | 1,808 | 1,450 | 1,648 | 1,740 |
| Aniseed.....cs | 278 | 274 | 205 | 631 | 146 | 407 |
| Cassia..... | 671 | 245 | 353 | — | 84 | 71 |
| Opium.....chts, &c. | 960 | 814 | — | — | — | — |
| Plumbago.....tms | 3,964 | 4,180 | 1,048 | 951 | 882 | 823 |
| Rhubarb.....chts | 658 | 446 | 875 | 501 | 665 | 790 |
| Saltpetre, Ft.....tms | 3,746 | 4,312 | 3,437 | 3,099 | 5,061 | 4,867 |
| Sarsaparilla.....bbs | 1,119 | 1,058 | 1,162 | 1,467 | 948 | 1,127 |
| Senna.....bbs, &c. | 2,852 | 2,411 | 2,006 | 704 | 1,685 | 1,045 |
| Shellac.....cs, &c. | 33,615 | 19,828 | 19,945 | 16,894 | 13,229 | 14,241 |
| Terra Japonica, Gambler tms | 606 | 839 | 2,867 | 2,726 | 3,222 | 2,173 |
| Cutch..... | 2,676 | 2,817 | 837 | 1,010 | 881 | 1,161 |
| Turmeric..... | 794 | 442 | 867 | 444 | 707 | 418 |

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

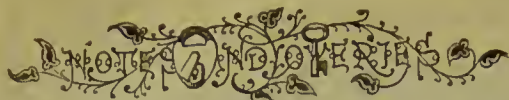
1877.

1876.

| ACIDS— | s. d. | s. d. | s. d. | s. d. |
|--|------------|----------------|----------------|----------------|
| Acetic | per lb. | 0 3½ to 0 0 | 0 3½ to 0 0 | 0 3½ to 0 0 |
| Citric | per lb. | 2 8 .. 0 0 | 2 7½ .. 0 0 | 2 7½ .. 0 0 |
| Hydrochloric | per cwt. | 5 0 .. 7 0 | 4 0 .. 7 0 | 4 0 .. 7 0 |
| Nitric | per lb. | 0 4½ .. 0 0 | 0 4½ .. 0 0 | 0 4½ .. 0 0 |
| Oxalic | per lb. | 0 5 .. 0 0 | 0 5 .. 0 0 | 0 5 .. 0 0 |
| Sulphuric | per lb. | 0 0½ .. 0 0 | 0 0½ .. 0 1 | 0 0½ .. 0 1 |
| Tartaric crystal .. | per lb. | 1 5½ .. 0 0 | 1 5 .. 0 0 | 1 5 .. 0 0 |
| powdered .. | per lb. | 1 5½ .. 0 0 | 1 5½ .. 0 0 | 1 5½ .. 0 0 |
| ANTIMONY ore | per ton | 240 0 .. 300 0 | 280 0 .. 330 0 | 280 0 .. 330 0 |
| crude .. | per cwt. | 0 0 .. 0 0 | 40 0 .. 42 0 | 40 0 .. 42 0 |
| star | per lb. | 47 0 .. 48 0 | 63 0 .. 65 0 | 63 0 .. 65 0 |
| ARSENIC, lump | per lb. | 25 6 .. 26 0 | 27 0 .. 28 0 | 27 0 .. 28 0 |
| powder | per lb. | 9 3 .. 10 0 | 12 0 .. 0 0 | 12 0 .. 0 0 |
| BRIMSTONE, rough .. | per ton | 115 0 .. 120 0 | 132 6 .. 135 0 | 132 6 .. 135 0 |
| roll .. | per cwt. | 9 9 .. 10 0 | 10 0 .. 10 3 | 10 0 .. 10 3 |
| flour | per lb. | 11 9 .. 14 0 | 14 0 .. 0 0 | 14 0 .. 0 0 |
| IODINE, dry | per oz. | 0 10 .. 0 10½ | 0 5½ .. 0 6 | 0 5½ .. 0 6 |
| IVORY BLACK, dry .. | per cwt. | 8 6 .. 0 0 | 8 6 .. 0 0 | 8 6 .. 0 0 |
| MAGNESIA, calcined .. | per lb. | 1 10 .. 0 0 | 1 8 .. 0 0 | 1 8 .. 0 0 |
| MERCURY | per bottle | 145 0 .. 0 0 | 200 0 .. 0 0 | 200 0 .. 0 0 |
| MINIUM, red | per cwt. | 23 3 .. 24 3 | 24 0 .. 24 6 | 24 0 .. 24 6 |
| orange .. | per lb. | 35 0 .. 0 0 | 37 0 .. 0 0 | 37 0 .. 0 0 |
| PRECIPITATE, red .. | per lb. | 3 9 .. 0 0 | 4 6 .. 0 0 | 4 6 .. 0 0 |
| white .. | per lb. | 3 8 .. 0 0 | 4 5 .. 0 0 | 4 5 .. 0 0 |
| PRUSSIAN BLUE .. | per lb. | 0 0 .. 0 0 | 0 0 .. 0 0 | 0 0 .. 0 0 |
| SALTS— | | | | |
| Alum | per ton | 140 0 .. 145 0 | 145 0 .. 155 0 | 145 0 .. 155 0 |
| powder | per lb. | 157 6 .. 160 0 | 160 0 .. 165 0 | 160 0 .. 165 0 |
| Ammonia: | | | | |
| Carbonate | per lb. | 0 5 .. 0 5½ | 0 5 .. 0 5½ | 0 5 .. 0 5½ |
| Hydrochlorate, crude, | | | | |
| white | per ton | 670 0 .. 720 0 | 560 0 .. 700 0 | 560 0 .. 700 0 |
| British (see Sal Am.) | | | | |
| Sulphate | per ton | 380 0 .. 385 0 | 370 0 .. 380 0 | 370 0 .. 380 0 |
| Argol, Cape | per cwt. | 75 0 .. 90 0 | 80 0 .. 87 0 | 80 0 .. 87 0 |
| Red | per lb. | 57 0 .. 72 0 | 70 0 .. 75 0 | 70 0 .. 75 0 |
| Oporto, red .. | per lb. | 0 0 .. 0 0 | 33 6 .. 34 0 | 33 6 .. 34 0 |
| Sicily | per lb. | 0 0 .. 0 0 | 0 0 .. 0 0 | 0 0 .. 0 0 |
| Ashes (see Potash and Soda) | | | | |
| Bleaching powd. .. | per cwt. | 6 6 .. 0 0 | 7 3 .. 7 6 | 7 3 .. 7 6 |
| Borax, crude | per lb. | 20 0 .. 36 0 | 30 0 .. 48 0 | 30 0 .. 48 0 |
| British refined .. | per lb. | 39 0 .. 40 0 | 53 0 .. 0 0 | 53 0 .. 0 0 |
| Calomel | per lb. | 3 4 .. 0 0 | 4 0 .. 0 0 | 4 0 .. 0 0 |
| Copper: | | | | |
| Sulphate | per cwt. | 21 6 .. 22 6 | 23 6 .. 24 0 | 23 6 .. 24 0 |
| Copperas, green .. | per ton | 60 0 .. 65 0 | 65 0 .. 70 0 | 65 0 .. 70 0 |
| Corrosive Sublimat. p. lb. | per lb. | 2 9 .. 0 0 | 3 5 .. 0 0 | 3 5 .. 0 0 |
| Cr. Tartar, French, p. cwt. | per cwt. | 102 6 .. 0 0 | 103 0 .. 104 0 | 103 0 .. 104 0 |
| brown .. | per lb. | 90 0 .. 0 0 | 82 6 .. 90 0 | 82 6 .. 90 0 |
| Epsom Salts | per cwt. | 4 9 .. 5 6 | 5 3 .. 7 0 | 5 3 .. 7 0 |
| Glauber Salts | per lb. | 3 6 .. 4 6 | 4 6 .. 5 6 | 4 6 .. 5 6 |
| Lime: | | | | |
| Acetate, white, per cwt. | per cwt. | 11 0 .. 20 0 | 11 0 .. 20 0 | 11 0 .. 20 0 |
| Magnesia: Carbonate .. | per lb. | 47 6 .. 0 0 | 45 0 .. 0 0 | 45 0 .. 0 0 |
| Potash: | | | | |
| Bichromate | per lb. | 0 4½ .. 0 4½ | 0 4½ .. 0 5 | 0 4½ .. 0 5 |
| Carbonate: | | | | |
| Potashes, Canada, 1st | | | | |
| sort | per cwt. | 23 0 .. 24 0 | 26 0 .. 26 6 | 26 0 .. 26 6 |
| Pearlashes, Canada, 1st | | | | |
| sort | per cwt. | 37 6 .. 0 0 | 80 0 .. 0 0 | 80 0 .. 0 0 |
| Chlorate | per lb. | 0 9 .. 0 0 | 0 8½ .. 0 9 | 0 8½ .. 0 9 |
| Prussiate | per lb. | 0 11 .. 0 11½ | 0 11½ .. 0 0 | 0 11½ .. 0 0 |
| red | per lb. | 2 1 .. 2 2 | 3 2 .. 3 3 | 3 2 .. 3 3 |
| Tartrate (see Argol and Cream of Tartar) | | | | |
| Potassium: | | | | |
| Chloride | per cwt. | 0 0 .. 0 0 | 7 0 .. 0 0 | 7 0 .. 0 0 |
| Iodide | per lb. | 13 0 .. 0 0 | 7 8 .. 0 0 | 7 8 .. 0 0 |
| Quinine: | | | | |
| Sulphate, British, in | | | | |
| bottles | per oz. | 16 6 .. 0 0 | 7 2 .. 7 3 | 7 2 .. 7 3 |
| Sulphate, French .. | per lb. | 15 3 .. 15 6 | 6 4 .. 6 5 | 6 4 .. 6 5 |
| Sal Acetos | per lb. | 0 7 .. 0 7½ | 0 7½ .. 0 0 | 0 7½ .. 0 0 |
| Sal Ammoniac, Brit. cwt. | per cwt. | 44 0 .. 45 0 | 44 0 .. 45 0 | 44 0 .. 45 0 |
| Saltpetre: | | | | |
| Bengal, 6 per cent. or | | | | |
| under | per cwt. | 24 0 .. 25 0 | 18 3 .. 18 9 | 18 3 .. 18 9 |
| Bengal, over 6 per cent. | | | | |
| per cwt. | per cwt. | 22 6 .. 23 6 | 17 6 .. 18 0 | 17 6 .. 18 0 |
| British, refined .. | per cwt. | 27 6 .. 28 6 | 21 6 .. 22 9 | 21 6 .. 22 9 |
| Soda: Bicarbonate, p. cwt. | per cwt. | 11 0 .. 11 3 | 10 9 .. 11 0 | 10 9 .. 11 0 |
| Carbonate: | | | | |
| Soda Ash | per deg. | 0 1½ .. 0 1½ | 0 1½ .. 0 0 | 0 1½ .. 0 0 |
| Soda Crystals | per ton | 82 6 .. 0 0 | 80 0 .. 82 6 | 80 0 .. 82 6 |
| Hypo-phosphite, per cwt. | per cwt. | 0 0 .. 0 0 | 0 0 .. 0 0 | 0 0 .. 0 0 |
| Nitrate | per cwt. | 14 9 .. 15 0 | 11 3 .. 11 6 | 11 3 .. 11 6 |
| SUOAR OF LEAD, White cwt. | per cwt. | 37 0 .. 38 0 | 40 0 .. 0 0 | 40 0 .. 0 0 |
| Brown, cwt. | per cwt. | 27 0 .. 0 0 | 27 0 .. 0 0 | 27 0 .. 0 0 |
| SULPHUR (see Brimstone) | | | | |

| | 1877. | | | | 1876. | | | | |
|---|------------|------|------|------|-------|------|------|------|-------|
| VERMIGRIS | per lb. | s. 1 | d. 1 | to 1 | 5 | s. 1 | d. 1 | to 1 | 5 |
| VERMILION, English | " | 3 | 0 | .. | 0 0 | 3 | 2 | .. | 0 0 |
| China | " | 2 | 9 | .. | 0 0 | 0 | 0 | .. | 0 0 |
| DRUGS. | | | | | | | | | |
| ALOE, Hepatic | per cwt. | 70 | 0 | .. | 140 0 | 60 | 0 | .. | 160 0 |
| Socotrine .. | " | 65 | 0 | .. | 170 0 | 65 | 0 | .. | 205 0 |
| Cape, good .. | " | 47 | 0 | .. | 49 0 | 39 | 0 | .. | 44 0 |
| Inferior | " | 41 | 0 | .. | 46 0 | 30 | 0 | .. | 38 0 |
| Barbadoes .. | " | 50 | 0 | .. | 180 0 | 45 | 0 | .. | 180 0 |
| AMBERONIS, grey..... | oz. | 75 | 0 | .. | 80 0 | 54 | 0 | .. | 65 0 |
| BALSAM— | | | | | | | | | |
| Canada | per lb. | 1 | 1 | .. | 1 2 | 1 | 3 | .. | 0 0 |
| Capivi | " | 1 | 9 | .. | 1 9½ | 2 | 0 | .. | 2 3 |
| Peru | " | 5 | 0 | .. | 5 3 | 4 | 6 | .. | 5 0 |
| Tolu | " | 7 | 0 | .. | 8 0 | 6 | 0 | .. | 6 6 |
| BARKS— | | | | | | | | | |
| Canela alba..... | per cwt. | 21 | 0 | .. | 28 6 | 25 | 0 | .. | 27 0 |
| Cascarilla | " | 17 | 0 | .. | 20 0 | 19 | 0 | .. | 25 0 |
| Peru, crown & grey | per lb. | 1 | 6 | .. | 2 10 | 1 | 2 | .. | 2 9 |
| Calisaya, flat .. | " | 2 | 6 | .. | 6 6 | 2 | 0 | .. | 4 5 |
| quill .. | " | 2 | 6 | .. | 9 6 | 2 | 0 | .. | 4 5 |
| Carthagena .. | " | 4 | 6 | .. | 5 8 | 1 | 5 | .. | 2 2 |
| Columbian .. | " | 1 | 6 | .. | 5 8 | 1 | 2 | .. | 3 4 |
| E. I. | " | 1 | 7 | .. | 8 0 | 2 | 0 | .. | 6 0 |
| Pitayo | " | 0 | 6 | .. | 1 6 | 0 | 7 | .. | 1 9 |
| Red | " | 2 | 3 | .. | 5 0 | 1 | 9 | .. | 4 6 |
| Bachu Leaves | " | 0 | 2½ | .. | 1 6 | 0 | 1 | .. | 1 1 |
| CAMPION, China .. | per cwt. | 92 | 6 | .. | 95 0 | 62 | 6 | .. | 63 6 |
| Japan .. | " | 97 | 6 | .. | 100 0 | 65 | 0 | .. | 68 0 |
| Refin. Eng. per lb. | " | 1 | 3 | .. | 1 4 | 1 | 0 | .. | 1 1 |
| CANTHARIDES | " | 2 | 6 | .. | 5 9 | 3 | 3 | .. | 3 9 |
| CHAMOMILE FLOWERS | p.cwt. | 50 | 0 | .. | 210 0 | 29 | 0 | .. | 50 0 |
| CASTOREUM | per lb. | 9 | 0 | .. | 30 0 | 6 | 0 | .. | 25 0 |
| DRAOON'S BLOOD, Ip. | p. cwt. | 100 | 0 | .. | 260 0 | 110 | 0 | .. | 200 0 |
| FRUITS AND SEEDS (see also Seeds and Spices). | | | | | | | | | |
| Anise, China Star .. | per cwt. | 92 | 0 | .. | 100 0 | 85 | 0 | .. | 102 6 |
| Spanish, &c. | " | 30 | 0 | .. | 35 0 | 26 | 0 | .. | 40 0 |
| Beans, Tonquin .. | per lb. | 1 | 9 | .. | 2 7 | 1 | 7 | .. | 2 6 |
| Cardamoms, Malabar | | | | | | | | | |
| good | " | 4 | 6 | .. | 5 2 | 3 | 6 | .. | 4 4 |
| inferior | " | 0 | 0 | .. | 4 5 | 0 | 10 | .. | 3 5 |
| Aleppy | " | 3 | 2 | .. | 4 4 | 2 | 0 | .. | 3 9 |
| Madras | " | 2 | 8 | .. | 3 10 | 1 | 9 | .. | 3 3 |
| Ceylon | " | 3 | 6 | .. | 5 0 | 5 | 0 | .. | 5 2 |
| Cassia Fistula.... | per cwt. | 10 | 0 | .. | 32 0 | 8 | 0 | .. | 14 0 |
| Castor Seeds | " | 5 | 0 | .. | 10 6 | 5 | 0 | .. | 10 6 |
| Cocculus Indicus .. | " | 9 | 0 | .. | 11 0 | 13 | 0 | .. | 15 0 |
| Colocynth, apple .. | per lb. | 0 | 0 | .. | 0 0 | 0 | 6 | .. | 0 11 |
| Croton Seeds | per cwt. | 30 | 0 | .. | 0 0 | 32 | 0 | .. | 0 0 |
| Cubebes | " | 27 | 0 | .. | 28 0 | 30 | 0 | .. | 0 0 |
| Cumin | " | 11 | 0 | .. | 23 0 | 17 | 0 | .. | 24 0 |
| Dividivi | " | 12 | 0 | .. | 18 0 | 15 | 0 | .. | 17 0 |
| Fenugreek | " | 8 | 0 | .. | 11 0 | 15 | 0 | .. | 22 0 |
| Guinea Grains .. | " | 0 | 0 | .. | 0 0 | 23 | 0 | .. | 0 3 |
| Juniper Berries .. | " | 8 | 0 | .. | 10 0 | 7 | 0 | .. | 10 0 |
| Nux Vomica | " | 13 | 0 | .. | 15 9 | 13 | 0 | .. | 15 6 |
| Tamarinds, East India, | " | 10 | 0 | .. | 15 6 | 14 | 0 | .. | 16 0 |
| West India | " | 16 | 0 | .. | 25 0 | 12 | 6 | .. | 25 3 |
| Vanilla, large | per lb. | 19 | 0 | .. | 27 0 | 30 | 0 | .. | 50 0 |
| inferior | " | 12 | 0 | .. | 18 0 | 13 | 0 | .. | 28 0 |
| GINOER, Preserved, per lb. | " | 0 | 5 | .. | 0 6½ | 0 | 5½ | .. | 0 10 |
| HONEY, Chili | per cwt. | 32 | 0 | .. | 42 0 | 43 | 0 | .. | 46 0 |
| Jamaica .. | " | 0 | 0 | .. | 0 0 | 41 | 0 | .. | 53 0 |
| Australian .. | " | 0 | 0 | .. | 0 0 | 0 | 0 | .. | 0 0 |
| IRECAUHANIA | per lb. | 6 | 5 | .. | 6 7 | 3 | 10 | .. | 4 6 |
| ISINGLASS, Brazil .. | " | 2 | 8 | .. | 4 9 | 2 | 0 | .. | 4 0 |
| Tongue sort .. | " | 3 | 2 | .. | 5 4 | 2 | 3 | .. | 5 0 |
| East India .. | " | 2 | 0 | .. | 5 6 | 0 | 9 | .. | 4 7 |
| West India .. | " | 3 | 11 | .. | 4 7 | 3 | 6 | .. | 4 3 |
| Russ. long staple | " | 8 | 0 | .. | 15 0 | 9 | 0 | .. | 12 6 |
| inferior .. | " | 0 | 0 | .. | 0 0 | 0 | 0 | .. | 0 0 |
| Simovia .. | " | 2 | 2 | .. | 3 3 | 3 | 0 | .. | 3 6 |
| JALAP, good..... | " | 0 | 8 | .. | 0 10½ | 0 | 7 | .. | 0 9 |
| infer. & stems .. | " | 0 | 7½ | .. | 0 7½ | 0 | 6 | .. | 0 8 |
| LEMON JUICE | per degree | 0 | 1 | .. | 0 1½ | 0 | 1 | .. | 0 1½ |
| LIME JUICE | per gall. | 0 | 0 | .. | 0 0 | 1 | 3 | .. | 1 8 |
| LIQUORICE, Spanish | per cwt. | 34 | 0 | .. | 39 0 | 0 | 0 | .. | 0 0 |
| Liquorice Root .. | " | 0 | 0 | .. | 0 0 | 13 | 0 | .. | 35 0 |
| MANNA, flaky | per lb. | 0 | 0 | .. | 0 0 | 5 | 6 | .. | 6 0 |
| small | " | 0 | 0 | .. | 0 0 | 1 | 6 | .. | 1 9 |
| MUSK, Pod | per oz. | 15 | 6 | .. | 43 0 | 12 | 0 | .. | 50 0 |
| Grain | " | 45 | 0 | .. | 50 0 | 37 | 0 | .. | 60 0 |
| OILS (see also separate list) | | | | | | | | | |
| Almond, expressed | per lb. | 1 | 4 | .. | 0 0 | 1 | 3 | .. | 0 0 |
| Castor, 1st pale .. | " | 0 | 4½ | .. | 0 4½ | 0 | 3½ | .. | 0 0 |
| second | " | 0 | 3½ | .. | 0 4½ | 0 | 3½ | .. | 0 3½ |
| Cod Liver | per gall. | 4 | 6 | .. | 7 6 | 4 | 6 | .. | 6 9 |
| Croton | per oz. | 0 | 2½ | .. | 0 0 | 0 | 2½ | .. | 0 0 |
| Essential Oils: | | | | | | | | | |
| Almond | per lb. | 20 | 0 | .. | 0 0 | 20 | 0 | .. | 0 0 |
| Anise-seed | " | 6 | 6 | .. | 0 0 | 6 | 9 | .. | 0 0 |
| Bay | per cwt. | 0 | 0 | .. | 0 0 | 65 | 0 | .. | 70 0 |
| Bergamot | per lb. | 10 | 0 | .. | 15 0 | 10 | 0 | .. | 15 0 |
| Cajeput | per bottle | 3 | 0 | .. | 3 6 | 2 | 9 | .. | 3 0 |
| Caraway | per lb. | 9 | 0 | .. | 9 3 | 9 | 0 | .. | 9 3 |
| Cassia | " | 3 | 7 | .. | 3 8 | 4 | 0 | .. | 4 0 |
| Cinnamon | per oz. | 2 | 6 | .. | 6 0 | 2 | 6 | .. | 6 6 |
| Cinnamon-leaf .. | " | 0 | 2½ | .. | 0 3 | 0 | 2½ | .. | 0 3 |
| Citronelle | " | 0 | 3 | .. | 0 0 | 0 | 1½ | .. | 0 2 |
| Clove | per lb | 8 | 6 | .. | 0 0 | 8 | 9 | .. | 0 0 |
| Juniper | " | 0 | 0 | .. | 0 0 | 0 | 0 | .. | 0 0 |
| Lavender | per l. | 1 | 8 | .. | 7 0 | 1 | 8 | .. | 7 0 |
| Lemon | " | 7 | 0 | .. | 9 6 | 7 | 0 | .. | 9 6 |
| Lemongrass | per oz. | 0 | 2½ | .. | 0 0 | 0 | 2½ | .. | 0 0 |

| 1877. | | | | 1878. | | | | 1877. | | | | 1878. | | | |
|-------------------------------|--------|-------|-------|-------------------------|-------|-------|-------|---------------------------------|----|-------|-------|--------------|---------|--|--|
| Essential Oils, continued:— | | | | Oils, continued:— | | | | WHOLE, South Sea, pale, per ton | | | | yellow „ | | | |
| Neroli | s. d. | 3 0 | 6 6 | s. d. | 3 0 | 6 6 | s. d. | 35 10 | to | 36 0 | 34 10 | to | 35 0 | | |
| Nutmeg | 0 5½ | 0 5½ | 0 5½ | 0 7 | 0 7 | 0 7½ | s. d. | 33 0 | to | 35 0 | 32 0 | to | 34 0 | | |
| Orange | 6 0 | 9 0 | 9 0 | 6 0 | 9 0 | 9 0 | s. d. | 31 0 | to | 0 0 | 28 0 | to | 30 0 | | |
| Otto of Roses | 16 0 | 22 0 | 22 0 | 13 0 | 25 0 | 25 0 | s. d. | 26 0 | to | 0 0 | 24 10 | to | 0 0 | | |
| Patchouli | 2 0 | 3 6 | 3 6 | 2 0 | 3 6 | 3 6 | s. d. | 49 0 | to | 0 0 | 45 0 | to | 45 10 | | |
| Peppermint: | | | | OLIVE, Gallipoli | | | | Gloja | | | | Levant | | | |
| American | 13 0 | 14 3 | 14 3 | 15 0 | 16 0 | 16 0 | s. d. | 49 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| English | 34 0 | 35 0 | 35 0 | 32 0 | 34 0 | 34 0 | s. d. | 46 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Rosemary | 2 0 | 2 6 | 2 6 | 2 0 | 2 6 | 2 6 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Sassafras | 2 3 | 2 6 | 2 6 | 2 3 | 2 6 | 2 6 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Spearmint | 12 0 | 16 0 | 16 0 | 14 0 | 16 0 | 16 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Thyme | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | s. d. | 48 10 | to | 49 0 | 0 0 | to | 0 0 | | |
| Mace, expressed | 0 6 | 0 10 | 0 10 | 0 6 | 0 10 | 0 10 | s. d. | 42 0 | to | 0 0 | 39 10 | to | 40 0 | | |
| OPUM, Turkey | 21 0 | 22 6 | 22 6 | 19 6 | 21 6 | 21 6 | s. d. | 37 10 | to | 38 10 | 37 0 | to | 37 5 | | |
| inferior | 10 0 | 18 0 | 18 0 | 9 0 | 18 0 | 18 0 | s. d. | 32 0 | to | 37 10 | 29 0 | to | 36 10 | | |
| QUASSIA (bitter wood) per ton | | | | GROUND NUT AND GINSELL: | | | | Bombay | | | | Madras | | | |
| RHUBARB, China, good and | 100 0 | 130 0 | 130 0 | 100 0 | 140 0 | 140 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| fine | 2 6 | 3 6 | 3 6 | 4 10 | 5 7 | 5 7 | s. d. | 45 0 | to | 0 0 | 35 0 | to | 0 0 | | |
| Good, mid. to ord. .. | 0 9 | 2 0 | 2 0 | 0 9 | 3 3 | 3 3 | s. d. | 39 10 | to | 40 0 | 36 10 | to | 37 0 | | |
| Dutch Trimmed .. | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | s. d. | 28 0 | to | 0 0 | 24 0 | to | 0 0 | | |
| ROOTS—Columba | 32 0 | 54 0 | 54 0 | 25 0 | 28 0 | 28 0 | s. d. | 36 10 | to | 0 0 | 36 10 | to | 34 12/6 | | |
| China | 30 0 | 32 0 | 32 0 | 19 0 | 24 0 | 24 0 | s. d. | 34 10 | to | 0 0 | 34 10 | to | 0 0 | | |
| Chiretta | 0 2½ | 0 3 | 0 3 | 0 3½ | 0 4 | 0 4 | s. d. | 39 0 | to | 0 0 | 38 0 | to | 0 0 | | |
| Galangal | 24 0 | 26 0 | 26 0 | 19 0 | 22 0 | 22 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Gentian | 22 0 | 24 0 | 24 0 | 23 0 | 24 0 | 24 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Hellebore | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Orris | 26 0 | 75 0 | 75 0 | 26 0 | 75 0 | 75 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Pellitory | 70 0 | 76 0 | 76 0 | 0 0 | 0 0 | 0 0 | s. d. | 25 0 | to | 0 0 | 21 9 | to | 22 0½ | | |
| Pink | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Rhatany | 0 4 | 1 0 | 1 0 | 0 4 | 0 8 | 0 8 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Seneca | 3 6 | 3 9 | 3 9 | 3 6 | 0 0 | 0 0 | s. d. | 0 10½ | to | 0 11 | 0 10½ | to | 0 0 | | |
| Snake | 0 6 | 0 6½ | 0 6½ | 0 7 | 0 8 | 0 8 | s. d. | 0 9½ | to | 0 0 | 0 8½ | to | 0 0 | | |
| SAFFRON, Spanish .. | 33 0 | 37 0 | 37 0 | 24 0 | 36 0 | 36 0 | s. d. | 55 0 | to | 76 0 | 110 0 | to | 0 0 | | |
| SALEP | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| SARSAPARILLA, Lima per lb. | 0 5 | 0 7 | 0 7 | 0 6 | 0 8 | 0 8 | s. d. | 0 0 | to | 0 0 | 0 0 | to | 0 0 | | |
| Guayaquil | 1 10 | 2 2 | 2 2 | 0 0 | 0 0 | 0 0 | s. d. | 0 0 | to | 0 0 | 15 0 | to | 23 0 | | |
| Honduras | 1 1 | 1 6 | 1 6 | 1 3 | 1 7 | 1 7 | s. d. | 33 3 | to | 35 0 | 40 0 | to | 45 0 | | |
| Jamaica | 2 6 | 3 0 | 3 0 | 1 9 | 3 0 | 3 0 | s. d. | 65 0 | to | 69 0 | 0 0 | to | 0 0 | | |
| SASSAFRAS | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | s. d. | 32 0 | to | 0 0 | 48 0 | to | 0 0 | | |
| SCAMMONY, Virgin .. | 24 0 | 30 0 | 30 0 | 24 0 | 30 0 | 30 0 | s. d. | 54 6 | to | 0 0 | 47 3 | to | 47 6 | | |
| second & ordinary .. | 6 0 | 22 0 | 22 0 | 6 0 | 22 0 | 22 0 | s. d. | 56 0 | to | 0 0 | 48 3 | to | 48 6 | | |
| SENA, Bombay | 0 1 | 0 4 | 0 4 | 0 1 | 0 4 | 0 4 | s. d. | 54 0 | to | 55 0 | 0 0 | to | 0 0 | | |
| Tinnivelly | 0 2 | 1 6 | 1 6 | 0 2 | 1 0 | 1 0 | s. d. | 12 0 | to | 15 0 | 12 0 | to | 15 0 | | |
| Alexandria | 0 5 | 2 0 | 2 0 | 0 5 | 2 8 | 2 8 | s. d. | 13 0 | to | 16 0 | 13 0 | to | 16 0 | | |
| SPERMACETI, refined | 1 3 | 1 4 | 1 4 | 1 4 | 0 0 | 0 0 | s. d. | 51 6 | to | 52 0 | 47 0 | to | 0 0 | | |
| American | 1 0 | 1 2 | 1 2 | 1 2 | 0 0 | 0 0 | s. d. | 48 0 | to | 60 0 | 47 0 | to | 66 0 | | |
| SQUILLS | 0 1½ | 0 3½ | 0 3½ | 0 3 | 0 4 | 0 4 | s. d. | 22 0 | to | 45 0 | 22 0 | to | 44 0 | | |
| UMS. | | | | CINNAMON, Ceylon: | | | | 1st quality | | | | 2nd do. | | | |
| AMMONIAC drop .. | £ s. | 2 2 | 2 10 | £ s. | 1 13 | 3 10 | £ s. | 1 9 | to | 3 7 | 2 3 | to | 4 3 | | |
| lump .. | 0 17/6 | 1 14 | 1 14 | 1 0 | 1 10 | 1 10 | £ s. | 1 6 | to | 2 8 | 1 10 | to | 2 10 | | |
| ANIMI, fine washed | 11 0 | 12 15 | 12 15 | 11 0 | 12 10 | 12 10 | £ s. | 1 3 | to | 2 3 | 1 7 | to | 2 8 | | |
| bold scraped .. | 9 15 | 10 15 | 10 15 | 9 15 | 10 15 | 10 15 | £ s. | 2 6 | to | 2 10 | 2 9 | to | 3 0 | | |
| sorts | 6 15 | 9 10 | 9 10 | 6 0 | 9 5 | 9 5 | £ s. | 2 2 | to | 2 4 | 1 10 | to | 2 0 | | |
| dark | 4 0 | 6 19 | 6 19 | 3 0 | 6 10 | 6 10 | £ s. | 1 4 | to | 1 6 | 1 4 | to | 1 5 | | |
| ARABIC, E.I., fine | 2 15 | 3 10 | 3 10 | 3 5 | 3 15 | 3 15 | £ s. | 1 0 | to | 1 1½ | 1 0 | to | 1 1 | | |
| pale picked .. | 2 5 | 2 14 | 2 14 | 2 10 | 3 0 | 3 0 | £ s. | 91 0 | to | 202 6 | 95 0 | to | 202 6 | | |
| sorts, m.d. to fin. | 1 7 | 2 0 | 2 0 | 1 2 | 2 3 | 2 3 | £ s. | 54 0 | to | 90 0 | 48 0 | to | 90 0 | | |
| garblings .. | 6 0 | 9 10 | 9 10 | 6 0 | 9 0 | 9 0 | £ s. | 29 0 | to | 0 0 | 38 0 | to | 37 0 | | |
| TURKEY, pick, gd. to fin. | 3 0 | 5 15 | 5 15 | 2 10 | 5 10 | 5 10 | £ s. | 24 0 | to | 24 6 | 28 0 | to | 29 0 | | |
| second & inf. .. | 2 10 | 3 10 | 3 10 | 1 15 | 2 5 | 2 5 | £ s. | 30 0 | to | 30 6 | 29 0 | to | 0 0 | | |
| in sorts .. | 1 14 | 3 8 | 3 8 | 1 2 | 1 6 | 1 6 | £ s. | 55 0 | to | 115 0 | 50 0 | to | 120 0 | | |
| Gedda | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | £ s. | 0 4½ | to | 0 5½ | 0 4½ | to | 0 5½ | | |
| BARBARY, white .. | 1 15 | 1 16 | 1 16 | 1 9 | 1 12 | 1 12 | £ s. | 0 3½ | to | 0 3½ | 0 3½ | to | 0 3½ | | |
| brown .. | 1 17 | 2 15 | 2 15 | 1 15 | 2 5 | 2 5 | £ s. | 0 10 | to | 1 4 | 0 10 | to | 1 4 | | |
| AUSTRALIAN | 0 18 | 4 0 | 4 0 | 0 19 | 1 15 | 1 15 | £ s. | 2 0 | to | 3 0 | 2 0 | to | 2 10 | | |
| ASSAPGETIDA, cm. to fin | 27 0 | 45 0 | 45 0 | 8 0 | 29 0 | 29 0 | £ s. | 2 0 | to | 3 0 | 2 0 | to | 2 6 | | |
| BENJAMIN, 1st & 2nd | 6 5 | 11 5 | 11 5 | 6 10 | 15 0 | 15 0 | £ s. | 0 11 | to | 2 0 | 0 11 | to | 1 10 | | |
| Sumatra 1st & 2nd | 3 10 | 5 5 | 5 5 | 3 10 | 5 0 | 5 0 | £ s. | 3 8 | to | 4 6 | 3 6 | to | 4 2 | | |
| 3rd .. | 6 0 | 6 15 | 6 15 | 6 0 | 6 15 | 6 15 | £ s. | 3 0 | to | 3 6 | 2 11 | to | 3 4 | | |
| COPAL, Angola red | 4 0 | 5 0 | 5 0 | 4 0 | 5 0 | 5 0 | £ s. | 2 2 | to | 3 0 | 2 6 | to | 2 11 | | |
| Benguela .. | 0 6 | 0 10 | 0 10 | 0 7½ | 0 11 | 0 11 | £ s. | 0 3½ | to | 0 4 | 0 3½ | to | 0 3½ | | |
| Sicra Leone, per lb. | 16 0 | 27 0 | 27 0 | 15 0 | 27 0 | 27 0 | £ s. | 2 5 | to | 2 9 | 1 9 | to | 2 5 | | |
| Manilla | 66 0 | 75 0 | 75 0 | 54 0 | 60 0 | 60 0 | £ s. | 2 4 | to | 2 6 | 1 7 | to | 1 10 | | |
| DAMMAR, pale | 65 0 | 74 0 | 74 0 | 48 0 | 58 0 | 58 0 | £ s. | 2 3 | to | 0 0 | 1 6 | to | 0 0 | | |
| Singapore | 9 0 | 15 0 | 15 0 | 12 0 | 20 0 | 20 0 | £ s. | 2 2 | to | 2 4 | 1 8 | to | 1 10 | | |
| EUPHORBUM | 0 5 | 1 3 | 1 3 | 0 6 | 1 6 | 1 6 | £ s. | 2 2 | to | 0 0 | 1 7 | to | 1 8 | | |
| LABRANUM | 200 0 | 240 0 | 240 0 | 200 0 | 240 0 | 240 0 | £ s. | 2 2 | to | 3 1 | 1 8 | to | 2 9 | | |
| AMBOGE, pkd, pipe per cwt. | 1 3 | 2 6 | 2 6 | 0 9 | 1 9 | 1 9 | £ s. | 2 4 | to | 2 6 | 1 8 | to | 1 10 | | |
| ALACUM | 40 0 | 50 0 | 50 0 | 30 0 | 49 0 | 49 0 | £ s. | 26 0 | to | 33 0 | 33 0 | to | 34 0 | | |
| ENO | 25 0 | 40 0 | 40 0 | 20 0 | 30 0 | 30 0 | £ s. | 1 7 | to | 1 8 | 1 11 | to | 2 0 | | |
| LOWRIE, rough .. | 42 0 | 60 0 | 60 0 | 40 0 | 50 0 | 50 0 | £ s. | 0 0 | to | 0 0 | 4 0 | to | 11 0 | | |
| scraped sorts .. | 4 0 | 5 0 | 5 0 | 4 0 | 5 0 | 5 0 | £ s. | 0 0 | to | 0 0 | 1 0 | to | 3 0 | | |
| LASTIC, picked .. | 150 0 | 200 0 | 200 0 | 170 0 | 200 0 | 200 0 | £ s. | 0 0 | to | 0 0 | 0 6 | to | 3 0 | | |
| SYRRH, gd. & fine per cwt. | 90 0 | 150 0 | 150 0 | 100 0 | 150 0 | 150 0 | £ s. | 19 3 | to | 0 0 | 23 0 | to | 23 3 | | |
| ord. to fair .. | 49 0 | 54 0 | 54 0 | 51 0 | 54 0 | 54 0 | £ s. | 28 0 | to | 29 0 | 27 0 | to | 31 0 | | |
| LIBANUM, p. drop | 45 0 | 48 0 | 48 0 | 45 0 | 50 0 | 50 0 | £ s. | 24 0 | to | 25 6 | 25 0 | to | 25 6 | | |
| amber & ylw. .. | 12 0 | 27 0 | 27 0 | 16 0 | 28 0 | 28 0 | £ s. | 15 0 | to | £3 10 | £3 0 | to | £3 10 | | |
| garblings .. | 65 0 | 67 6 | 67 6 | 50 0 | 60 0 | 60 0 | £ s. | 20 0 | to | 20 0 | 0 0 | to | 0 0 | | |
| NEGAL | 80 0 | 110 0 | 110 0 | 85 0 | 104 0 | 104 0 | £ s. | 18 0 | to | 32 0 | 20 0 | to | 25 10 | | |
| ANDARAC | 80 0 | 93 0 | 93 0 | 95 0 | 145 0 | 145 0 | £ s. | 8 0 | to | 8 10 | 8 10 | to | 9 0 | | |
| BELLAC, Orange .. | 70 0 | 77 0 | 77 0 | 90 0 | 120 0 | 120 0 | £ s. | 5 10 | to | 6 0 | 5 10 | to | 6 0 | | |
| Liver | 20 0 | 21 6 | 21 6 | 20 0 | 22 0 | 22 0 | £ s. | 8 16 | to | 9 0 | 9 0 | to | 10 0 | | |
| CHES | 240 0 | 400 0 | 400 0 | 240 0 | 400 0 | 400 0 | £ s. | 6 10 | to | 6 15 | 7 0 | to | 8 0 | | |
| RAOACANTH, leaf | 25 0 | 175 0 | 175 0 | 25 0 | 175 0 | 175 0 | £ s. | 5 10 | to | 6 0 | 5 10 | to | 6 10 | | |
| in sorts .. | 88 0 | 38 10 | 38 10 | 43 0 | 0 0 | 0 0 | £ s. | 10 0 | to | 11 5 | 8 10 | to | 10 10 | | |
| LS. | £ s. | 34 10 | 34 10 | £ s. | 34 0 | 35 0 | £ s. | 6 0 | to | 0 0 | 6 0 | to | 0 0 | | |
| EL, pale | 32 0 | 34 10 | 34 10 | 30 0 | 33 10 | 33 10 | £ s. | 10 0 | to | 11 5 | 8 10 | to | 10 10 | | |
| yellow to tinged | 31 0 | 31 10 | 31 10 | 29 0 | 29 10 | 29 10 | £ s. | 6 0 | to | 0 0 | 6 0 | to | 0 0 | | |
| brown | 83 0 | 0 0 | 0 0 | 85 0 | 0 0 | 0 0 | £ s. | 10 0 | to | 11 5 | 8 10 | to | 10 10 | | |
| ERM | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 | £ s. | 6 0 | to | 0 0 | 6 0 | to | 0 0 | | |
| Body | 88 0 | 38 10 | 38 10 | 43 0 | 0 0 | 0 0 | £ s. | 10 0 | to | 11 5 | 8 10 | to | 10 10 | | |
| OD | 88 0 | 38 10 | 38 10 | 43 0 | 0 0 | 0 0 | £ s. | 6 0 | to | 0 0 | 6 0 | to | 0 0 | | |



Correspondents should send us with their questions their names and addresses, not necessarily for publication, but for our own satisfaction. Many of them seem to think this unnecessary.

Enquirer wishes to know the name of some work on the manufacture of British wines. Can any of our readers supply it?

Unquendum.—The original frankincense is *olibanum* (see *Hanbury's "Pharmacographia,"* pp. 120-124). The gum frankincense of modern pharmacy is *Thus Arabicum*, a concrete resin from one of the pine tribe (*Hanbury*, p. 549).

Argent.—A ready means of testing for the presence of silver in coins, brooches, &c., is to moisten the metal and rub it with a piece of lunar caustic. All the metals that are likely to be used for ornament in imitation of silver reduce silver salts, and wherever the moistened caustic touches them it leaves a black mark.

Ignoramus.—The best practical work for the study of water analysis is Wanklyn's "Water Analysis," published by Triebner, London. The methods he uses, though not perfect, are reliable for comparison. A full account of the various processes is also given in Sutton's "Volumetric Analysis."

To Cement Indiarubber to Glass, &c.—A good cement, that will render indiarubber in any form adherent to glass or metal, is, sometimes a desideratum with photographers, and in the *Polytechnic Journal* there is a simple recipe given for the preparation of such a compound. Some shellac is pulverised, and then softened in ten times its weight of strong ammonia, whereby a transparent mass is obtained, which becomes fluid after keeping some little time, without the use of hot water. In three or four weeks the mixture is perfectly liquid, and, when applied, it will be found to soften the rubber. We are told that the rubber hardens as soon as the ammonia has evaporated again, and thus becomes impervious both to gases and to liquids. For cementing the rubber sheet, or the material in any shape, to metal, glass, and other such surfaces the cement is strongly recommended.

A Subscriber.—The essential point in making crystalline pomade is to avoid stirring as much as possible during cooling, and to cool as rapidly as possible. A form we have found answer very well is:—Spermaceti, 8 ozs.; castor oil, 4 ozs.; perfume, according to fancy. We never heard of liquorice in balls, and do not know how it can be got into this form. Perhaps some of our correspondents can inform us.

Enquirer.—The following is the best formula for lime juice and glycerine we have ever tried:—

| | |
|---------------------------|---------|
| Almond oil | 12 ozs. |
| Olive oil | 12 ozs. |
| Aq. calc. | 10 ozs. |
| Liq. calc. sacch. | 2 ozs. |
| Ess. lemons | 2 drms. |
| Ol. jasmin | 2 drms. |

X. Y. Z.—"Some good and fragrant compounds for hair washes and pomades" is rather vague. Do you want perfume for pomade, or a form for pomade itself? We will do our best for you when we know what to do.

Amateur.—A good formula for lime cream is:—

| | |
|--------------------------|--------|
| Ol. amygd. dulc. | 13xvj. |
| Aq. calcis | 13vij. |
| T. canthar. | 13j. |

But a contemporary has just reported that lin. ammon. is best made with green and somewhat rancid olive oil. Perhaps this would succeed for the lime cream.

J. P. R.—Southernwood is a name for *Artemisia Abrotanum*. It is very little used in medicine, and can probably be obtained of any herbalist. Few gardens are without it.

X. Y.—Distilled water, if distilled from a copper still, condensed in a tinned worm, and collected in a clean vessel, will keep for any length of time. When carefully prepared it contains organic impurities, and is sure to putrefy sooner or later. Nothing can prevent it.

Artificially-Coloured Wines.—At the meeting of the Paris Academy of Sciences, on September 11, M. Lamattina read a paper on a process for detecting wines coloured artificially. The simplest way, according to the author, is to mix 100 grammes of wine with 15 grammes of peroxide of manganese roughly pulverised, stirring the mixture 12 or 15 minutes, and filtering through a double filter. If the wine be pure it passes colourless, if it retain its colour it has been coloured artificially. If the peroxide be not pure, but ferruginous, the iron is dissolved; the fuchsine, if

present, forms an insoluble combination, which remains in the filter, and the filtered liquid has a slightly yellow colour. The residual peroxide is treated with alcohol, acetic acid and ammonia.

Ara Kara (Boonville, Missouri, U. S.).—Glycerite, or (according to the British Pharmacopoeia) glycerine of starch, is made by rubbing together 1 oz. of starch with 8 fl. oz. of glycerine, and gradually heating to 240° F., with constant stirring. We have despatched your other inquiry to the proper quarter.

A Subscriber (Halifax), finds turpentine exercise a corrosive action on cisterns made of galvanised iron, tin, and zinc, all of which he has tried for storing it. Glass carboys are objectionable on account of their unworkability. Wooden barrels, we suppose, are found to allow too much evaporation. A slate tank put together with Portland cement is generally used for storing such fluids as are likely to corrode metal, but we cannot think that turpentine is often sufficiently acid to act upon tin. The subject is new, however, on which we should be glad of information from other readers.

Robin Hood (Birmingham).—The matriculation of the London University is the best examination to pass if you wish for a London degree. The only other certificate accepted by that University in lieu of it is a degree of arts from Sydney, Melbourne, or Calcutta. To obtain M.D. (London), you must pass, besides the preliminary, scientific and two medical examinations, and have at least four years' professional study after matriculating. This gives you the M.B. degree. Four or five years afterwards the M.D. degree may be competed for, and includes logic, moral philosophy and medicine, as well as a practical examination in clinical medicine. You can, of course, obtain medical qualification on much easier terms from the Apothecaries' Hall or the College of Surgeons. For fuller details we must refer you to our annual educational number published in September of each year.

Our correspondent W. B. B. wants the address of the maker or seller of "Golden Fisher's Snuff," which is said to be green, and to have been used for diseases of the eyes. Can any of our readers supply the information. An ordinary form for "eye snuff" is to mix $\frac{1}{2}$ dram. of turpentine mineral with 1 oz. of dry Scotch.

Rheumatism Mixture.—The editor of the *Nashville Medical Journal* says of the following prescription that he can attest its value in rheumatism, gout, and all other diseases in which there is an excess of proportion of white corpuscles to the red:—

| | |
|--------------------------|------------|
| Chlorate potassa | 3ss. |
| Tr. guaiacum | 5ij. |
| Tr. phytotheca | 5j. |
| Muc. acac. | q. s. |
| Honey | q. s. |
| Cinnamon water | q. s. 35j. |

Teaspoonful every two hours.

Inquirer.—[Three correspondents this month assume this signature, and two adopt the equally striking one of "Subscriber;" we should prefer a little more variety]. Pills may be coated with sugar or French chalk by first moistening them with a strong solution of balsam of tolu in ether, and then transferring to a box containing the powder. When done on a large scale, the powder is put into a large copper pan, which is kept in motion and warmed by charcoal, and the pills, slightly moistened, are added. If you want any other sort of coating, please name it.

Taurus asks for a good name for a smelling essence for colds in the head, &c., and whether it will require a stamp. [Here is another gentleman who finds making a fortune an easier matter than discovering word]. He wishes the trade generally to take the matter in hand, and make suggestions to him on the subject. We consider such a matter of personal interest only, and therefore can only suggest to our correspondent that he should offer a prize for the most brilliant discovery of a name through the medium of our advertising columns.

M. S. S. (Dayton, Ohio, U.S.) asks the meaning of a few terms he meets with in this paper, but which are not used in America. A "turnover" apprentice is one who for some cause or other is unable to complete his apprenticeship with his first master, and has to finish it with another man. An "improver" is a young man who has not found his apprenticeship give him sufficient experience for a place as assistant, and who takes, in consequence, an assistant's work with less than an assistant's pay for the sake of the experience gained. An indoor assistant is one who lives in his employer's house; an outdoor assistant is one who lives out. A second counterman devotes his whole time to the retail counter, and has no superior in that department.

We do our utmost to keep this journal out of the catalogue of the "Comics," but our correspondents try to force us on. The two following items were among our letters the other morning:—

Your "official" contemporary remarks in a recent number, "In the herbaceous ground at Kew there are many curious plants now in bloom," I respectfully submit that every plant there is *Keir*-ious.

Kiddle says the annexed is original.—We are glad the gentleman has the courage to confess his crime.—Why is a farmer, who is going into a druggist's shop to buy Cooper's sheep dipping powder like a young lady who is getting into a bathing machine?—Because he is going to have a good dip.